

# AMERICAN FARMER.

VOL. XII.

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No. 10.

## FARM WORK FOR APRIL.

The time has come when no agriculturist can, without pecuniary loss, put off the operations of his farm from one day to another, as every succeeding day brings with it its own peculiar labors, which should be attended to. Delays in the execution of work now, even for a few days, frequently operate most disastrously, and sometimes blight the very best grounded hopes of success. Unceasing vigilance, therefore, should be observed to do all things at the proper time, and do them well. The utmost care must be taken in the preparation of the ground, and to effect this, we would remark that, in our opinion, the eye of the master is absolutely necessary, no matter how competent may be the overseer or hands; no matter how faithful and willing they may be, the personal inspection of the owner in the working of his force, is equal to 20 per cent. in the quantity of work executed, besides operating in an equal ratio as to the manner of its execution. We say this from personal experience, and believe it our duty to speak with frankness. With these general remarks we would refer to various matters in the present number which we consider should receive immediate attention.

### HAULING OUT MANURE.

As there are broad districts of country wherein circumstances may have existed to prevent attention to this part of the duty of the farm, we enjoin upon all thus situated to proceed at once to haul out their manure for their spring crops and plough it in as speedily as possible. Every one who undertakes the labor of accumulating manure—and every cultivator of the earth should do so—should consider it a matter of duty, as it is his interest, to preserve its most active and fertilizing principles from deterioration and waste. If at the time of breaking up the manure for hauling out, a bushel of plaster or 10 bushels of pulverized charcoal were mixed with every twenty two-horse loads of it, either of these substances would tend in a great measure to prevent the escape of those volatile gases, which so materially operate to fructify the land and encourage the growth of the plants grown thereon. A solution made of 10 lbs. of copperas to every load of the manure, if sprinkled thereon would have the same effect—so would 5 lbs. of sulphuric acid diluted with a few gallons of water; and we believe that, if a solution of 5 bushels of salt were made and sprinkled over every 20 two-horse loads of the manure, that the

result would be similar. We, however, prefer the use of the two first named substances, as we believe that their effects would be equally operative and more lasting.

### OATS.

In ordinary seasons, a large proportion of land devoted to this crop is usually seeded before this; but owing to the intense severity of the last winter we fear there are large breadths of land where circumstances have combined to prevent the putting in the oat-crop. To those then who have not sown their oats, our advice is, to get them in the ground with the utmost possible expedition, as the earliest sown, yield the most, as well as the best grain.

### BARLEY.

This crop when grown under favorable circumstances of soil and season, is a profitable one—the grain finds a ready market at fair and remunerating prices, the yield being from 20 to 40 bushels per acre: when chopt and mixed with cut straw, or hay, it makes excellent food for horses; in its nutritive principles it is comparatively rich; all working animals sustain their labor on it in vigor and spirit; hogs fatten kindly on it; its straw is relished by cattle—and what is very important, it is an excellent crop to sow clover on.

*Of the Soil.*—Barley delights most in a fertile strong loam. Land that would yield 20 bushels of wheat would produce from 30 to 40 bushels of barley. It is, however, useless to sow barley on poor land without manuring it. If the soil be poor, it must be assisted by manure of some kind or other. Ten two-horse loads of marsh mud, mixed with 5 two-horse loads of stable or barnyard dung, per acre, would ensure a good crop of barley, the weather being seasonable; so would 200 lbs of guano, so, also, would 10 bushels of bone-dust and 10 bushels of spent ashes, mixed together. The first and second manures should be ploughed in, the third should be harrowed in. If manured with either of the above kinds of manure, in the prescribed quantities, the product would be remunerative, while the ground would be sufficiently strengthened to bear being set in clover.

### ARTICHOKES.

As the *Jerusalem Artichoke*, is a crop that we can, with a good conscience, recommend to such of our agricultural friends as may raise their own pork, or who may desire to provide succulent food through the winter for their milk cows, we repeat our notice of it that we gave last month,

and call attention to it. Any land that will bring 40 bushels of corn per acre, with manure, would, with like treatment in their culture, produce from 500 to 600 bushels of tubers of the Jerusalem Artichoke. A peck of the tubers, cut up into small pieces, if given at a meal, twice a day, mixed with cut straw and a quart of meal, or a gallon of bran, moistened with water, will make a cow give a full flow of milk.

If the stalks of the Jerusalem Artichoke, be cut up as corn-stalks are cut up, in the beginning of October, and carefully dried, an acre would give from 2 to 3 tons of excellent fodder for cattle, which when cut into small, say, inch pieces, sprinkled with salt, and moistened with hot water, and permitted to remain till cool, is greatly relished by cattle. If cooked or steamed it is still better. Where hogs may be intended to be fed by them, all the trouble to be sustained, after the stalks and fodder are removed, is, simply to turn the hogs into the lot, where they will do their own digging and eating. When thus feeding they find water enough in the artichokes, so that there is no necessity to give them any; it is, however, always necessary while thus feeding, to keep them at all times supplied with a trough, wherein there are charcoal, rotten wood and ashes. Thirty hogs would find plenty of food on an acre of artichokes for a month, not only to subsist them, but grow fat upon; while they would leave seed enough in the ground to stock it the next year.

**Mode of Culture.**—Manure the ground with about the same quantity and kinds of manure as are given to an acre in corn when liberally fed; plough it in 8 inches deep, harrow and roll, then list your land 3 inches wide; by 2 feet across, the same depth as for potatoes. Have your tubers cut into sets as are potatoes, plant a set at every intersecting list, and cover the sets up; in the culture treat them as a well cultivated crop of corn should be.

**Quantity of Seed per acre.**—15 bushels of tubers cut into sets, each set with two eyes, will plant an acre. The sets should be dried in plaster, or ashes, to stop the bleeding.

**Top-Dressing.**—After the plants are up a few days give them a top-dressing of the following mixture, to each acre: 5 bushels of ashes, 1 bushel of plaster and one load of rich mould, or stable dung.

**Soil.**—The artichoke delights most in a deep, fertile sandy loam.

**Continuance in the Soil.**—If the ground be manured and cultivated annually, there will be no necessity for replanting for 7 or 8 years.

**Caution.**—As the Artichoke is a very tenacious plant and remains in the soil for a number of years, the lot selected for its culture should be one that can be spared from other cultivation for several years.

## ROOT CULTURE.

This, unfortunately, is among the neglected things in our system of agriculture; but it should not be so; for, if properly attended to, it is capable of conducing more towards the comfort of our stock, and to the profit of our system of husbandry, than is almost any other branch now followed. In England, the turnip culture alone, has added millions of pounds sterling, annually to the productive resources of her agriculturists, and have, as a resultant consequence, increased the aggregate value of the landed estates of that kingdom hundreds of millions of pounds sterling. With these well established facts before our people, we have never been able to account for the apathy that prevails as to the root culture. Why such culpable indifference should exist among our agriculturists we have never been able to assign any justifiable cause. It may be, however, traced to that aversion too often existing in the agricultural mind, to change from the old plodding ways of doing things handed down to us by our ancestors—ways that have robbed the soil of its virgin riches, and driven good men and true from their birth places—from the haunts of their childhood; and from their associates from infancy to manhood—from the graves of their ancestors and friends and kindred, to seek new homes, new friends, and new associations in the far-off wildernesses of the West, there to meet and endure privations, dangers, and diseases, that they "never dreamt of in their philosophy;"—or, perhaps, it may be traced to another aversion—a dislike for anything like minute and accurate culture. But, be the cause whatever it may, we feel ourselves compelled by a sense of duty, to us high and imposing, by that desire that is in us to see American agriculturists rising superior to the antiquated prejudices of by-gone times, and to see them arming themselves with the enlightened resolution to promote their interests through the aid afforded by the lights of the experience which surround them. We say, that, influenced by these considerations, we shall be urged by duty to hold up the advantages of the root culture to the consideration of our agricultural patrons and friends until we shall have rallied around us a host of advocates. Humanity as well as national and individual wealth, all combine to enforce the propriety of adopting the root culture, to a greater or less extent as an important branch of our husbandry. We are conscientiously impressed with the belief, that in whatever light it may be viewed, it is right and proper that it should be fostered. The more stock we can feed well, the more manure will there be made, and as a consequence the more our lands will be fertilized, the more will they produce, and the greater the profit accruing to the culturist. When, then, all these considerations so forcibly appeal to the heart,

and the understanding, in favor of the root culture, it certainly must be conceded to be the business and the duty of patriotism to favor its adoption.

**Kinds of Roots to be cultivated.**—The kinds of roots that we recommend are the following, viz: *Parsnips, Carrots, Mangel Wurtzel, Sugar Beet, Ruta Baga, and the Common Turnip.*

**Time of Seeding.**—Parsnips, Carrots, Mangel Wurtzel and Sugar Beet, should be drilled in any time after the frost is out of the ground, up to the beginning of May;—the sooner, however, the better after the frost is out of the ground, where largeness of roots is desirable—and as largeness gives quantity, that is no mean consideration as cattle food.

The *Ruta Baga* turnip should be drilled in about the middle of June—from the 15th to the 20th of that month.

The *Common Turnip*, should be drilled in, or sown broadcast, from the 26th of July till the 10th of August, the nearer the first named period the better.

**As to Product.**—Each of the above roots, under good condition of soil, as manuring, ploughing, harrowing, rolling and culture, would yield from 5 to 600 bushels per acre. More than 1300 bushels of beets have been grown on an acre under favorable circumstances, but as we do not wish to encourage extravagant hopes, or to excite over sanguine anticipations, we have estimated the product per acre at from 5 to 600 bushels, and those quantities we can vouch for where the season is congenial and justice has been done the several crops in their culture.

**Of Manures.**—All manure for roots of every kind are the better for being well rotted or broken down by decomposition:

Composts may be formed of equal portions of decomposed stable or barn-yard manure, road-scrappings, marsh-mud, the earth from head-lands, or wood's-mould; that is one-half of the quantity to consist of the manure, the other half of any one or all of the other named substances. The compost should be thrown into mass and lie two weeks before being used, and to be thoroughly mixed; for every 20 two-horse loads of the compost, 15 to 20 bushels of ashes, 2 of salt and 1 of plaster should be added and mixed in the mass as that is being mixed. Ten two-horse loads of the above will answer for an acre.

Two hundred pounds of Peruvian Guano, and 1 bushel of plaster, will be sufficient for an acre.

Ten bushels of bone-dust, 10 bushels of ashes, 2 bushels of salt and 1 bushel of plaster, made into pie, suffered to remain 10 days, then to be thoroughly mixed together, and drilled in, will also answer for an acre, the bones to be moistened before being put in pie.

**Of the Soil.**—All roots delight most in a deep, rich sandy-mould. The Mangel Wurtzel, however, will prosper admirably in a clayey mould.

**Application of the Manures, and Preparation of the Ground.**—The compost should be evenly spread over the ground, then plough the ground as deep as a strong team can force the share into it, say from 8 to 10 inches in depth. The ploughing must be done with great exactness—great truthfulness—no banks to be left unturned up; the furrow-lices must be turned flat, then harrow until every clod is broken fine; this done roll the land with a heavy roller, and lay off your drills. The bone-dust must be harrowed in.

#### MANGEL WURTEL—SUGAR BEET.

As the cultivation of these is the same we shall treat them under the same general head.

**Preparation of the seed.**—Pour warm water over them, let them remain in soak 24 hours, drain the water off through a colander, or sieve; then add to the seed, when drained twice their bulk of soot and ashes, or ashes and plaster, which must be thoroughly mixed with them, so as to separate the seed and render them easy of being drilled.

**Quantity of seed per acre.**—Three pounds of seed of either kind of beets, is about the right quantity.

**Width of Furrows.**—From 27 to 30 inches apart is about the most eligible distance for the rows to be apart. This gives space for the working of a 1 horse cultivator, and saves much hoe and hand labor in their culture. Depth of furrows, 1 inch. The plants when thinned out should stand 6 inches apart in the drills.

**Notes of drilling in the seed.**—We have dropped them by hand, using the finger and thumb; from the mouth of a quart bottle, and by a drilling machine.

When we first commenced, we drilled by the hand, but found it very severe upon our back.

The next year we improved a little upon the hand system, and drilled the seed in from the mouth of a bottle, half-filled with sand, keeping the bottle on the shake the whole time.

In subsequent years we procured a hand-drilling machine, which by the way every root culturist ought to have. With this machine we drilled in 2 acres per day. Our drill had not the convenience of the present ones—it merely drilled in the seed, a drill being previously made by a line, with the corner of a hoe—a hand followed with a rake, who covered the seed with it and pressed the earth down with the back part of it. The drilling machines of the present day, make the drill, deposit the seed, cover them and roll.

**Culture.**—When the plants first come up, dust them with a mixture comprised of equal parts of ashes and plaster, or plaster and soot, or ashes,



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**Quantity of seed per acre.**—Three pounds of seed of either kind of beets, is about the right quantity.

**Width of Furrows.**—From 27 to 30 inches apart is about the most eligible distance for the rows to be apart. This gives space for the working of a 1 horse cultivator, and saves much hoe and hand labor in their culture. Depth of furrows, 1 inch. The plants when thinned out should stand 12 inches apart in the drills.

**Modes of drilling in the seed.**—We have dropped them by hand, using the finger and thumb; from the mouth of a quart bottle, and by a drilling machine.

When we first commenced, we drilled by the hand, but found it very severe upon our back.

The next year we improved a little upon the hand system, and drilled the seed in from the mouth of a bottle, half filled with sand, keeping the bottle on the shake the whole time.

In subsequent years we procured a hand-drilling machine, which by the way every root culturist ought to have. With this machine we drilled in 2 acres per day. Our drill had not the convenience of the present ones—it merely drilled in the seed, a drill being previously made by a line, with the corner of a hoe—a hand followed with a rake, who covered the seed with it and pressed the earth down with the back part of it. The drilling machines of the present day, make the drill, deposit the seed, cover them and roll.

**Culture.**—When the plants first come up, dust them with a mixture comprised of equal parts of ashes and plaster, or plaster and soot, or ashes,

plaster and soot. A bushel will answer for an acre. Let the dusting be done early in the morning when the plants are wet with dew. Repeat the dusting three or four successive mornings.

The plants, when 3 or 4 inches high, should be thinned out so as to stand 12 inches apart in the rows, selecting the most healthy and vigorous plants to remain. Where there are blank spaces, draw plants from where they are too thick, and fill them up. This must be done during a rain or just after a rain. After you have completed the thinning, go carefully over each row, and wherever a plant has more crowns than one—and there will sometimes be from 2 to 4—pinch off all but one.

At the time of thinning out the plants, work around them with hoe and hand, relieving them from all weeds and grass. In ten days from this run the cultivator through the middle of the rows, to clean off the weeds and grass, and let the atmosphere and dew into the earth, work immediately around and between the plants with hoe and hand. In two weeks from this give your beets another such working, and most generally the labor of tillage will be found to have been completed. The great object in the culture of these roots is to keep them clean, and the soil open to the influences of the sun, air, dew and rain.

*Depth of Drills.*—One inch is the proper depth.

#### THE PARSNIP.

This root is of great intrinsic value, whether we consider its fine edible qualities as a table-vegetable or regard it as stock food. Hogs eat parsnips with great avidity, and fatten on them readily.—All the pork of the Island of Guernsey is fattened with parsnips, and the pork there is said to be of delicious sweetness and flavor. Milch-cows fed upon parsnips cut fine, mixed with cut straw or hay, and a small quantity of meal or bran, afford a large flow of milk and rich cream, while the butter made from the latter is of the finest nutty flavor. Indeed, all domestic animals are fond of parsnips, and thrive and fatten on them. As an alternative food for horses, nothing is more grateful to that animal than an occasional feed of carrots or parsnips. A peck of either root cut up fine, and mixed with a peck of cut straw or hay, and half a gallon of chapt oats or rye, with a handful of salt, make a most invigorating meal for a horse; a few such feeds in a week in winter will open his hide, soften his hair and keep his system in a healthful condition.

*Time of planting.*—This will depend upon the location and object in view. If wanted for table use, it will be time enough to drill in the parsnip seed from the 1st to the 10th of May: If wanted to feed cattle, they should be got in as soon as ever the frost is out of the ground and it can be thoroughly prepared.

*Soil.*—As we have remarked elsewhere, the parsnip delights in a deep, fertile, sandy loam.

*Preparation of the Soil.*—The same as for beets.

*Quantity of seed per acre.*—From 2 to 3 lbs.

*Age of the seed.*—There is no certainty of parsnip seed coming up if more than a year old, unless they may have been kept with great care.

*Preparation of the Seed.*—The same as for beet seed, mix 2 parts sand with one part parsnip seed.

*Modes of seeding.*—The same as for beets.

*Distance and depth of Drills.*—Parsnips should be drilled in 2 feet apart; drills 1 inch deep.

*Culture.*—When the plants have come up and grown to the height of 3 inches, work between the drills with the hoe—among the plants in the drills, clean out all the grass and weeds with the hand, stirring the earth when needed with the hoe. At this working thin out the plants so as to stand 6 or 8 inches apart in the drill. After which dust them with an equal mixture of three parts ashes, 1 part plaster, or soot. This dusting must be given in early morning when the plants are wet with the dew. At intervals of 2 weeks apart, give your plants two other workings, and you will have completed their culture. As we remarked in the case of the beets, the great object of culture is to keep the ground clean of weeds and grass, and open to atmospheric influences.

#### CARROTS.

*Soil.*—A deep fertile, sandy-loam is the best.

*Preparation of Soil.*—Same as for Parsnips.

*Preparation of the Seed.*—Take equal portions of seed and sand and rub them freely between the palms of your hands, then soak the seed in warm water 24 hours, drain them through a cullender, or sieve, then mix the seed with a mixture of ashes and plaster so as to separate them.

*Quantity of seed per acre.*—Two pounds of seed is sufficient.

*Culture.*—The same culture to be observed as for parsnips, with the exception that the plants should not be thinned out so widely apart: for the *Altringham* varieties 4 inches apart—for the *White Belgium*, 6 inches apart. These are the best field varieties.

In dusting carrots at the time of their coming up and culture, mix 3 parts ashes, 1 part plaster and 1 part salt, together.

#### RUTA BAGA TURNIPS.

As the time for seeding this excellent root will not have arrived before June, we only mention it now in order that you may provide yourself with manure.

#### CORN PLANTING.

As we have freely expressed our views upon this subject in recent numbers, we will not now repeat what we have therein said, and only recur to the subject now to enjoin upon planters to do

justice to their corn crop, as well in the richness and quantity of their manure, the preparation of the soil, in timely planting, and in culture, and to request you to bear in mind that the time for planting everywhere is when the frost is entirely out of the ground.

#### DEEP PLOUGHING.

All lands that are not wet, should be ploughed deep. The *New Yorker* has the following brief though judicious remarks upon the subject:—

"Deep ploughing uniformly increases the quantity of grass and root crops. It also tends to consolidate light soils. It has been found that the heads of grain, though much fuller and heavier, stand more upright on such land as has been deeply ploughed. This is attributed to the greater strength of the roots, and the much greater depth to which they penetrate, when invited to it by deep thorough cultivation. Such soils, however, always require for perfecting their pulverization and fully developing their tillage qualities, to be well harrowed and rolled."

The above extract, brief as it is, has much good sense and enlightened philosophy in it. As illustrative of its truth we will state that, in conversation a few weeks since with one of the best farmers of Western Virginia, he told us that some five years since he hitched a team of 6 horses to a heavy plough, and ploughed a field that he intended for corn 15 inches in depth, subsoiling it 6 inches deeper; the season proved a dry one, and although in the adjoining fields of his neighbor his corn was wilted and burnt up almost, his corn planted on his deeply ploughed and subsoiled field was a remarkably heavy crop, and remained green and in full vigor, and that that field has shown the benefits of deep culture in all subsequent crops grown on it. In this case the subsoil happened to be of such quality as to justify the departure from the safer rule of deepening the soil gradually.

#### ITEMS FOR THE MONTH OF APRIL.

**LOCERNE.**—This excellent forage plant should be got in this or the succeeding month.

**EARLY POTATOES.**—If you were not fortunate enough to get your early potatoes in last month, if possible, put them in the first week of this.

**SPRING WHEAT.**—If it be your intention to seed any spring wheat, get it in the early part of this month, the earlier the better. We however, do not, except from necessity, recommend its culture this side of the Hudson river—certainly not in the Middle and Southern States. We tried it more than once, and our experience taught us that it was a very uncertain crop in this region, and we are very sure that it would be more so further south.

**FENCES.**—If you have not already attended to your fences, you should at once carefully examine every pannel yourself, and have all necessary repairs forthwith made.

**BRAMBLES, BRIARS, BUSHES, &c.**—Have all these effectually extirpated from your fields and fences.

**HEMP AND FLAX.**—For these crops plough deep, harrow thoroughly and roll; then at several days apart give the field at least 3 harrowings to destroy weeds.

**Tobacco Plants.**—Repeatedly examine these, and attend to their wants.

**WORKING ANIMALS.**—As the time has arrived when these generous creatures are called upon to exert all their powers in their daily toils, see to it that they receive kind attention, good food, and plenty of it, good lodging and grooming.

**MILCH COWS AND OTHER CATTLE.**—Attend to these as advised last and preceding months.

**SELECTION OF STALLIONS.**—Be careful in selecting a stallion to serve your mares. The difference of a few dollars in price is nothing when compared to the importance of getting a good colt.

**POULTRY.**—Be attentive to the food and comfort of these.

**OUT-HOUSES AND CELLARS.**—Cleanse and white wash these.

**EARLY TURNIPS.**—Turnips when raised early for market bring a good price, therefore put in an acre as we advised last month.

**COMPOST HEAPS.**—Be assiduous in the accumulation of these.

### WORK IN THE GARDEN.

#### APRIL.

To begin right, is the true policy in all things, depending upon human skill. Without you do so, success will be held by a precarious tenure; for though under peculiarly favorable circumstances, success may occur, though the observance of the rule be neglected, yet there is no certainty of the issue, and as it is as easy to begin right, as wrong, it is alike your interest and duty to prefer the former course, especially as there is no occupation among the pursuits of humanity that more imperiously calls for its adoption than that of gardening. Recollect that time lost in the beginning of the season, can never be regained. Therefore, if you desire your garden to be a pattern for your neighbors to follow, which feeling should pervade every country gentleman's bosom—if you wish it to be a resource whence your family can draw full supplies of the comforts and delicacies of the season—whence they can derive the best and earliest vegetables and garden fruits—we say, if you possess these laudable feelings, and we are sure you do, then address yourself at once to the business of making your garden worthy of your ambition and the pride of your ladies. Take our word for it, if you give to your wife and daughters the necessary force and means, that they will so arrange that department of your homestead, that it will be at once a source of pride, of pleasure, and of comfort; for woman never neglects a sacred duty, especially when it comes commended to her by the considerations of affection,



the desire for excellence, and generous achievement. It is a part of her nature to leave nothing undone, that she ought to do:—where duty calls, there is she to be found—what she undertakes to do, under the promptings of the heart, she does well.

With this brief introduction, we will step into the garden, and endeavor to point out some of the many things that should claim attention during this month.

**Cauliflowers.**—If the plants grown in your hot-bed are sufficiently large and stout enough for transplanting—and if you were provident enough to sow the seed at the proper time, they are now fit to be set out. Then forthwith select a bed, have it prepared, and set the plants out the first rain that occurs.

The bed in which they are to be grown for flowering, should be a deep, rich, moist, (*not wet*) loam, it should be heavily manured, dug a full spade deep, raked fine as the spading proceeds; this done, dust it freely with a mixture of 5 parts ashes, 2 parts plaster, and 1 part salt, rake the mixture in, when it will be fit for the reception of the plants. Be careful in taking up the plants; do it so as that a ball of earth adheres to the roots. The best way to effect this is to raise them from the plant bed with a garden trowel, or with a broad pointed case-knife. The plants thus carefully withdrawn from the bed must be planted down to their leaves, in rows running north and south, 3 feet wide, the plants the same distance apart in the rows; then bring the earth around the plants so as to form a slight basin, say about 3 inches in depth to receive the water.—Unless it be raining give the plants water at the time of setting them out; water them every second day thereafter, until they begin to grow vigorously. In dry weather, throughout the season, they must be watered freely; this is best done about sun-down.

**Sowing Cauliflower Seed.**—Early this month, select a rich loamy spot on a border facing the south, manure it well, dig in the manure a spade in depth, rake the ground till all the clods are reduced perfectly fine, then sow cauliflower seed, rake the seed in lightly, pat the ground with the back of your spade, so as to compress the earth around the seed, then dust the bed with a mixture of ashes, plaster and salt, as advised above. When the plants are up and about an inch high, water them with a decoction of soot, made thus: place a pint of soot in a small cotton bag, and place that in a light barrel, over that pour a kettle of boiling water, when cool, fill up the barrel with rain, or other soft water, place the barrel in the sun, stir the contents and water the plants.

**Setting out Cabbage Plants.**—If you have cabbage plants ready, set them out the first rainy season. Select your bed the same as for cauliflowers, manure it very liberally, dig the manure in a full spade's depth, rake well as the spading is being proceeded with; then sow over it a mixture of ashes, salt, and slaked lime, thoroughly mixed together. Set out your plants in rows 3 feet apart, the plants 2½ feet asunder in the rows—let the rows run north and south. Before drawing the plants from the seed-bed, prepare a mixture of 6 parts rich fine mould, 1 part soot, and 1 part flour of sulphur, in a piggins or other tight vessel, reduce it to the consistence of cream with water. As you withdraw the plants from the plant-bed, insert the roots and stems into this mixture up to the lower leaves, when the plants will be ready to set out. This mixture will prevent the attack of the cut-worm, while it will give a healthful impetus to the growth of the plants. If

the weather should be dry after your plants are set out, have them watered every alternate day until rain occurs; throughout the season, in all times of drought, water your cabbage plants copiously at least three times a week, as they are a thirsty vegetable and require moisture to insure vigorous and healthful growth. A few waterings with soap suds will prove highly salutary.

**Sowing Cabbage Seed.**—Prepare a bed as advised for cauliflowers, and sow cabbage seed of sorts.—Let the border face the south, and treat the plants when they come up as recommended for cauliflowers.

**Broccoli—Setting out Plants.**—Plants of these large enough for the purpose may now be planted out in the open ground. The land must be prepared by manuring, digging, raking, &c., as for cabbages, the plants set out as recommended for cauliflowers, and treated the same way.

**Sowing Broccoli Seed.**—Sow broccoli seed early this month as recommended for cauliflowers.

**Sowing Borecole Seed.**—Prepare a spot on a southerly exposed border as recommended for cabbages, and sow borecole seed—treat the plants the same as advised for cabbage plants.

**Brussels Sprouts and Jerusalem Kale.**—Sow seed of these as advised above.

**Garden Peas.**—Continue to drill in some rows of these during the month, to secure a continuous supply.

**Beans.**—Drill in a few rows of these every seven days throughout the month.

**Siberian Kale.**—Within the first ten days of this month sow a small bed of Siberian Kale seed, for sprouts in summer. Manure the bed well, dig deeply, and rake fine, then dust the bed with a mixture of 7 parts ashes and 1 part plaster, then sow the seed as you would turnip seed. To ensure thin sowing, mix three times of the bulk of seed with fine dry sand, or ashes, rake the seed *very lightly* in, and pat the bed with the back of a shovel.

**Lettuce.**—If you have lettuce plants large enough, set them out in a well prepared bed, for heading—and sow a small quantity of seed every 10 days throughout the month, for additional supplies.

**Radishes.**—Sow radish seed every week throughout the month.

**Spinach.**—Drill in a few rows of spinach seed the first week in this month, and then again about the middle of it.

**Small Sallading.**—Seed of all kinds of small sallading should be sown at the beginning of this month, and at intervals of 7 days apart during its continuance.

**Carrots and Parsnips.**—Full crops of these for fall and winter use should be drilled in, in the beginning of this month. For the mode of manuring, culture, &c., we refer the reader to our last month's journal.

**Celery.**—Plant out any plants that you may have ready for setting out—and sow seed to grow plants for late crop.

**Asparagus Beds.**—If not previously dressed, give them a dressing of well rotted manure, and salt, the first week in this month. Care must be taken in forking in the manure not to injure the shoots.

**Beets.**—Drill in your beet seed for a general crop.

**Sowing Onion Seed.**—Tolerable sized onions may be grown, if drilled in the first week of this month.

**Leeks.**—Drill in a few rows of leeks in the first week or ten days of this month.

**Planting Onions out for Seed.**—If circumstances prevented you from setting out your onions for seed

last month, set them out the first week in this month, the nearer the first of the month the better.

*Garlick, Rocombote, Shallots and Chives.*—If these were not planted last month, they may be planted out any time up to the 10th instant. Let them be watered in dry weather till they begin to grow, and until rain occurs.

*Early Turnips.*—No well regulated garden should be without a bed of early turnips. If not as replete with nutrition as some other kinds of vegetables, they are very acceptable to the palate and popular with the better and more refined taste, and serve to garnish the dinner table; besides which, while they contribute to increase home comforts and enjoyments—tend to render the resources of the garden complete—to enlarge its vegetable supplies—when grown near a market, they command ready sale and good price. We have sold them at \$1½ per bushel.

*Of the Soil.*—The soil best adapted to the culture of the turnip is a deep, fertile sandy-loam.

*Preparation of the Soil.*—1. Spread well rotted manure over the bed to the depth of 2 inches, spade it in to the full depth of the spade, taking care to rake fine as the spading is proceeded with, then spread over the surface in the proportion of 200 lbs. to the acre of super-phosphate of lime, rake that in, then spread at the rate of 20 bushels of ashes per acre, and 2 bushels of salt per acre, which must be lightly raked in, then roll the bed, when it will be ready for the reception of the seed. If sown broadcast, it will require at the rate of 1½ lbs. of seed per acre. If sown in drill, which is the best way, 1 lb. of seed will be sufficient for an acre.

2. After the bed is thoroughly spaded up and finely raked, spread thereon at the rate of, per acre, 400 lbs. of Peruvian Guano, 1 bushel of plaster, 2 bushels of salt, and 50 bushels of spent ashes, rake the whole in thoroughly, and then sow the seed.

3. Dig and rake the ground as before advised, and sow thereon, at the rate per acre, of 300 lbs. of the Manipulated Guano, 1 bushel of plaster, 2 bushels of salt, and 50 bushels of spent ashes, rake the whole in thoroughly, and sow the seed, or drill it in as may best suit your purpose.

*Preparation of the Seed.*—Soak the seed twelve hours in warm water before sowing, then strain off the water, and mix with the seed four times their bulk of dry spent ashes, or sand to separate them, for the greater facility of sowing thinly, or drilling them.

*Culture.*—When the turnips first come up dust over them, early in the morning, while the dew is on the leaves of the plants, a mixture comprised of equal portions of soot, spent ashes, and plaster.—Continue this daily until the plants get into the rough leaf.

If sown broadcast, the turnips must, when a few inches high, be thinned out so as to stand 10 inches apart. If drilled in, the drills must be 18 inches apart, and the plants thinned out so as to stand 8 inches apart in the drills.

When the seed is sown broadcast the soil must be patted down, or rolled, to compress the soil around them, and encourage germination. If the drill is used, that machine will make the drill, deposit the seed, and roll at one and the same time.

The weeds and grass must be kept down, and the soil stirred to keep it open to the influences of the atmosphere.

*Salsafy or Vegetable Oyster.*—Drill in some drills with the seed of this fine root. Select a rich, deep, sandy-loam bed, manure it freely with well rotted

dung, dig that in spade deep, rake fine, then spread thereon a free dusting of spent ashes and plaster, rake again, then stretch your line across the bed, north and south, and draw drills 10 inches apart, ½ inch deep, then drill in the seed as thinly as possible, covering with the rake, and patting the earth down with the back part of it.

When the plants are an inch or two high, thin them out with the hand so as to stand 4 inches apart, relieving them with the hoe and hand, at the same time, of all grass and weeds. Keep them clean of weeds by three or four hoeings as they may be required by the season, and all the work necessary will have been performed.

*Of its character, and the modes of Cooking it.*—In flavor, this root very much resembles the oyster, and hence one of its names. When properly cooked, it is a delicious root, and as it is a healthful one, it should find a place in every gentleman's garden. A few drills will suffice for a family, though as it is a popular root, it may be advantageously grown for market.

Boiled as parsnips are, seasoned with salt and pepper with drawn butter poured over it, it is highly esteemed:—boiled, mashed, steamed, mixed up with wheaten flour, butter and eggs, made into cakes, the cakes dusted with grated crackers, and fried in butter, it forms a great delicacy.

*Skirret.*—This vegetable is grown the same as salsafy, is cooked like it, has much of its peculiar flavor, and is esteemed a highly nutritious, wholesome vegetable.

Sow the seed thinly in drills 12 inch apart, thin them out to stand 6 inches apart in the drills, cultivate them cleanly, and the result will be a good crop.

*Artichokes.*—Dress your garden artichokes, and sow more seed.

*Red Peppers.*—Sow red pepper seed of various sorts in a warm southerly exposed border.

*Tomatoes—Egg Plants.*—The seed of each of these vegetables, should be sown early this month to grow plants for a late crop. If you are provided with plants set them out.

*Planting out for raising Seed.*—If you have not already done so, set out cabbages, beets, parsnips, carrots, turnips, &c., for seed early this month—the nearer the first the better.

*Potatoes.*—Plant your early Irish potatoes as early this month as possible—the nearer the first of the month the better. Treat them as we have advised for field culture.

*Beets.*—Drill in your late crop of beets.

*Horseradish.*—If you have not already provided your garden with a bed of this excellent condiment, set to work at once, and set a bed of it out the first week in this month.

*Rhubarb or Pie-plant.*—If you have plants of this vegetable set them out. If you have none, buy a dozen or two of plants and set them out.

*Okra.*—Drill in a few rows of this excellent soup vegetable.

*Pot and Medicinal Herbs.*—Sage, Thyme, Parsley, Hyssop, Sweet Basil, Chamomile, Fennel, Lavender, Sweet Marjorum, Mint, Rosemary, Rue, Tansey, Celandine, Comfrey, Elecampane, Hoarhound, Balm, may all now be set out or the seed sown.—The earlier the better.

*Nasturtium.*—Drill in a few rows of Nasturtium seed: drop the seed 4 inches apart, the drill 4 feet apart. When the plants are 6 inches high, stick them as you would pens.

**Endive.**—Sow seed of the endive the last week in this month.

**Planting Fruit Trees.**—Trees that have not burst into leaf may be planted out the first week in this month. Be sure to mulch the roots.

**Raspberries.**—New plantations of raspberries may be made the first week in this month.

**Strawberry Beds.**—Keep these clean from weeds; water the beds of fruiting plants frequently; but avoid touching the flowers with the water.

In conclusion, permit us to advise you to see that your gardener and his hands, at all times, keep your garden free from weeds and grass, and that, in times of drought that they use the watering pot freely.

## FLORICULTURE—APRIL, 1857.

*Prepared for the American Farmer by John Feast, Florist.*

Now that the severity of the winter is past, a great deal more air will be required to prevent plants from drawing, which often occurs if sufficient care is not taken—give plenty of room to such as are about flowering, by putting aside those that have already bloomed, and arrange such as will give show to the house. Give frequent syringing, and close the house early, so to retain as much heat as possible, to do without fire heat, which is not good at this time of the year, if it can be avoided—as plants are more healthy without it.

**Pelargoniums**, will be throwing up their flower stems, and require care in tying up, and spreading the branches, to form a fine head; give a little guano water occasionally, and keep clear of green fly, by fumigating.

**Camellias**, will be growing rapidly, and require abundance of water, and frequent syringing; inarching may yet be done if the stocks have not made too much growth.

**Chrysanthemums**—separate the roots, and strike by cuttings—re-pot the summer flowering varieties, and forward their growth, as they are an acquisition, flowering in the summer months.

**Fuchsias**, will soon make a show, and should be neatly trained; give them the last shift in suitable pots to flower in—they would be better if a little liquid water was given them once a week; it makes them grow more vigorously.

**Japan Lillies**, should be potted, and seeds sown now.

**Gloxinias and Achenenes**, re-pot in larger pots, as they advance in growth.

**Dahlias**, under propagation require to be re-potted; as they advance in growth take off cuttings of the young wood, if a stock is wanted.

**Heaths** that have done flowering, **Epacris**, and such Cape plants, place in a cooler shady situation, where they can be hardened off; give them a shift in larger pots if they require it.

**Roses** in pots will require plenty of air, and syringing night and morning—fumigate to keep down the green fly, which destroys the appearance of the plants—pot off cuttings, if rooted.

**Verbenas, Petunias**, and all bedding out plants, have a good stock for planting out in the border, and sow seeds in a frame of such tender annuals as are of a delicate growth to bring them in a forward state, for planting out about the middle of next month.

In the flower garden much is required in pruning, re-planting and training all plants neatly before they make any growth—also in separating herbaceous flowering roots, and planting box edging,

laying grass, and making walks, of whatever material is on hand; but bear in mind to have plenty of rough material at the bottom, to cause good drainage, otherwise the walks will not be so dry and pleasant to walk on in wet weather; a depth of at least nine inches of rough material, will be necessary, so that the water will pass off freely and ways leave the surface dry.

## DAIRY FARMING—FOOD FOR MILCH COWS.

LOUISBURG, N. C., Feb. 26th, 1857.

*To the Editors of the American Farmer:*

Although I pursue a calling that has no relation to farming whatever, yet I take great pleasure in reading your excellent Journal, from which I derive much that is both interesting and practical.

I read an article in your February No., on the "Feeding Cows for Butter—New Views." The opinion of the author's views have for years been confirmed by all cattle owners in this section, who give their cows proper attention, in order to make them yield a large quantity of milk and butter. A cow that would, without pea-feed yield some 1½ gallons milk per day, can be made to yield twice the amount in a very short time, by giving her one gallon cow-peas (boiled) daily. It imparts to the milk and butter alike, a richness that no other kind of food which we can command here, will give. Along with the pea feed the cow must have a reasonable amount of cut fodder, hay or shuck.

I made an experiment in the month of October, 1855, with another article which perhaps is not known to those who take pleasure in raising fine dairy cows. It is what we call cotton-seed-meal—the ground cotton-seed after the oil is expressed. My neighbor owned a cow of common stock, which yielded daily 3½ gallons milk, from the pea feed (one gallon of feed daily). I owned one also of common stock, but well marked with strong points for a good dairy cow; I give her ½ gallon cow-peas (boiled) with 1 pint of cotton-seed-meal twice a day; she was turned into a field during the summer from which corn had been recently gathered, and then stabled or penned at night. In less than 10 days she increased in milk from about 2½ gallons to 4 gallons per diem, with a relative increase in the yield of butter. She was milked morning and night, 10 gallons at each milking. I endeavored to make her excel my neighbor's cow with the pea feed alone, but failed; but as soon as the cotton-seed-meal was given, the improvement was wonderful.

I am unable to say to what principle in the cotton-seed-meal this quality is to be ascribed. I suppose it must be the same that exists in the rapeseed oil-cake or the linseed-cake, alluded to in Houghton's article.

My friend was not aware of the advantage I took of him until after yielding the palm to me, when it was made known.

Truly, yours, &c.

WM. R. KNEAS.

**GREAT INCREASE IN WEIGHT.**—A correspondent in Fauquier Co., Va., informs us that a neighbor had a stall-fed beef, which increased in weight 15 pounds in 19 days. He fed on cut sheave oats and meal, (corn) twice a day, and roots once. When there were signs of purging, he gave 1 table spoonful of red-oak bark—(dried and pounded); this corrected the looseness and gave the steer a voracious appetite.



(For the American Farmer.)

**RENOVATION OF WORN-OUT LANDS, &c.**

BY A VIRGINIA FARMER.

Who, six years ago, became the purchaser of a farm of 450 acres, considered the poorest of the poor forest farms. This farm embraces about 150 acres of what may be considered Rappahannock flats, but is of that character known as crawfish or white oak lands, thus differing from the Rappahannock lands generally; the residue is the first rising land from the river, and for the most part is a chocolate red, and a stiff or tenacious soil, not unlike the most of the lands on the ridge between the Rappahannock and Potomac Rivers. When the present occupant became the purchaser of this farm, about two hundred acres only had been opened, and this, like most of the lands in the Old Dominion, had been under very injudicious culture; presenting as it did, the most impoverished appearance; so much so, as to extort the exclamation from a friend of the purchaser on first visiting it, that it was the only farm on which he had ever set foot that had not one rich spot; this, however, he remarked, had none. Up to this time about 400 acres of this farm has been brought in actual cultivation; thus adding about 30 acres of new land annually to what was originally open. The farm had, as before remarked, been injudiciously cultivated; the ploughing had been effected for the most part with one horse, I think, and that a mule, or some animal with no more strength. I shall not exaggerate; I am sure, if I shall add that the average crop of wheat for the 20 years preceding the occupancy of the present owner, did not reach the average of 150 bushels, and the corn crop not over 500 bushels annually; whereas, those of the present proprietor now amount, to 1300 bushels of wheat, and of corn 15 to 1800.—The crops of corn have not compared favorably with those of the wheat from the first—but the farm has been in progress of opening all the while. Then, for the course which has brought about such favorable results; for certain it is, all that has been said is worth nothing in the absence of such testimony.

Much has been said and written upon the subject of thorough drainage and deep tillage, but like a great deal else that has been taught in theory, but little practised—I mean comparatively little understood, and its importance never yet fully realized to the extent it should be. This land has been pretty uniformly ploughed with three good horses, (not sand flirts,) and in some instances with four, (large horses); thus sinking the water, from the effects of which the land had so long suffered, from the retentive character of the soil. And here the writer would remark; that, in his humble judgment, it is by no means necessary that the evidence of springs be seen to constitute the necessity of deep tillage, (here ditches are first needed,) but the propriety of deep ploughing cannot be too strongly urged in all high lands, where the soil is so retentive as not to admit the free absorption of the water with which it is furnished by the Giver of all Good. The ditching of the 150 acres of flat land has cost an outlay of about \$10 per acre, and yet more money is required to be spent for this item of expense.—Special caution has been observed, in addition to the deep tillage of the hill land, to keep back from the flat land, by means of hill-side ditches, the excess of water from the surrounding hills; in

addition to these means, about 200 lbs. Peruvian Guano per acre has pretty generally been used in the production of the wheat crop; nothing for the corn save the manure raised from the ordinary farm sources. Ashes and lime have been used to a limited extent with manifest great advantage to the grass crops, which, though small, comparatively, were of a character calculated to excite the most sanguine expectations as to future results; giving, as did the crops, conclusive evidence of the adaptation of the soil to produce such crops not hitherto accredited either to the soil or climate of this region of country. The outlay for these manures was certainly not equal to the value of the crops raised. It does not become the writer himself to speak of the present condition of the farm. It is, however, conceded that the like improvement in so short a time has scarcely a parallel. The means which have brought about this result has mainly been given; viz: thorough drainage, deep tillage. I have had no system, as yet. My land, however, has more grass on it than my neighbors by many spires; and it has been my aim at all times to give the land as much the benefit of grass as possible—so necessary to resuscitation of all lands. Keep it free from the tramping of stock in wet weather especially. And in addition to the artificial manures, I raised all I could on my farm, which has been much more than is usually made, I dare say; and never allow any to remain over a season for the want of time to carry it out. I do this, though all things else be neglected. The receipts, gross, for five years for wheat, have reached about \$12,000; this will do pretty well, you'll say, for a farm that cost my predecessor only \$2,500—\$4,500 cost to occupant.

King George's Co., Va., Feb. 13, 1857.

From the Patent Office Report.

**LIVE FENCES—OSAGE ORANGE. (*Machura americana*.)**

The osage orange, the favorite hedge plant of the United States, is too well known to require a lengthened description here. From its hardihood, rapid growth, tenacity of life, facility of propagation, as well as its unrivalled beauty and protection, against animals of various kinds, its utility no longer remains an experiment.

Hedges of the rarest beauty and excellence have long been growing near Boston, Philadelphia and Cincinnati, as well as in Kentucky, Tennessee, Northern Missouri, and, in short, in all the Middle and Southern States. Some of these fences have been standing for twelve or fourteen years, and their branches have become so interlocked, guarded as they are by their enormous spines, that no farm stock can pass through them. They are also free from the attacks of insects and animals of all kinds.

This tree may readily be propagated by seeds, from which it will grow sufficiently large in three years to form a hedge. It succeeds best on land moderately rich—such, for instance, as will produce good Indian Corn—but it will grow in almost any soil that is not too moist.

The line of ground intended for a hedge, should first be dug and well pulverized—say from 12 to 18 inches deep, and two feet wide, along the centre of which the plants may be set.

In connexion with the above, we refer to Mr. Harshbarger's advertisement on the cover of this No.

## TALBOT CO. (Md.) FARMING.

Messrs. Editors:—Thinking that some account of our doings in Old Chapel, would not be uninteresting to you, I have thought proper to let you hear from us. Many years gone by, "Chapel District," of Talbot county, was renowned for its fertility of the soil and large production of the crops grown upon the land; indeed many farmers of the Bay-Side district of aforesaid county, were compelled to resort to this district to purchase corn for their families' consumption, not making enough at that time to support themselves the year. Now, Messrs. Editors, mark the changes in the improvement in those lands; the farmers of the "Bay-Side" kept steadily improving their lands, whilst the farmers of Chapel District impoverished their land, and now the Bay-Side has as good, if not better land than any part of our county; there has been however, in their district a remarkable change in the mode of Farming, for the last five or six years. When I was a boy farmers generally at that day paid very little attention to the improvement of the soil, but their great desire was to enquire how much they could get in cultivation, and by this mode they wore out their lands; hence, the actual necessity for improvement began to be a matter of very serious thought; these lands have changed hands too. If I may so speak, we have a different population, at least we have those amongst us that have set the ball of improvement in motion, and have ceased to entertain old fogyism longer, but they have turned their attention to the improvement of the soil, and the inquiry is now, how much manure shall I get out; and again it is the great desire of many farmers amongst us, to cultivate no more than can be well manured—this is as it should be. My candid opinion is, that if we till less land, and manure heavily, we can make more money, which is the great desire of all farmers. Thanks be to the President and Directors of the Maryland and Delaware Rail Road, for their unceasing efforts in obtaining and laying the foundation for a Rail Road through our county, Queen Anne and Caroline to the Delaware Road. This Road when completed will be a source of great profit to the farmers of Chapel District; by this Road they can have all the Lime they may need, delivered on their farms, or near by, which is the basis of all permanent improvement. Already things are taking a different turn, lands in our district have gone up more than three fold; lands which 25 years ago would not command more than, from three to six dollars per acre, will readily bring from twenty to forty dollars. The Chapel Farmer's Association still continue their meetings, and are doing much good; by their example many are stimulated to go and do likewise. A few days ago I was invited very politely to ride with one of our members, Mr. A., to one of his farms, to see a Machine at work; after arriving we took a stroll through and about his farm, and I must confess, I was most agreeably disappointed, knowing this farm a few years back, when it was tenanted out to a then, so called good farmer; after this Mr. A. took his farm in his own hands, and set to work, and has in my humble judgment, made rapid strides in improvement; the crop when he let it out was small, being from three to four hundred bushels of wheat, and not more than two to two hundred and fifty barrels corn. I have been told by my friend since my visit that he sold fourteen

hundred dollars worth of wheat; his oats and corn are not sold yet. I know not how many bushels of oats, but I think he has from three to three hundred and fifty barrels of corn, and perhaps four hundred. There are many more of our members who are making rapid improvements, and of which I would like to speak, but fearing that it would make this letter too long I shall reserve them to some future time; I will only speak of one or two more. It was my privilege to be at our friend R's, a few days since, together with many of our board, friend R., is very much in favor of the drilling system, indeed, from the looks of his wheat, he should be, for notwithstanding the severe winter, his wheat is as green as a leak. He too, is powerfully improving his lands; his crops are heavy indeed, his composts show that he is not relaxing any of his former energy. Our nearer friend J. R., is also setting a good example to his neighbors; he too has been making rapid improvement, his crops have been increased (particularly his wheat crop) more than three-fold. I will now conclude, hoping I have not intruded on your time and patience. I am, truly yours, &c.

W. P. L.

## THE FARMER—DISEASES OF COWS—DAIRY FARMING—U. S. AGRICULTURAL FARM, &amp;c.

AVONDALE, CARROLL Co. Md., }  
March 5th, 1857. }

To the Editors of the American Farmer:

The perusal of the March No. of the American Farmer has reminded me that I have not yet paid my subscription to your admirable Journal, for the present year. Therewith inclose you the required sum. In my own case, I think the indirect or incidental benefit I derive from carefully reading each monthly No. of the Farmer, is even greater than any direct or positive increase of information. In other words, it is not so much the acquisition of new facts and truths, as the effect which its personal has, to stimulate thought, and to cause many important points connected with my vocation, to pass in review before me at periodical intervals, which might otherwise be overlooked. Your own editorials I always find particularly suggestive, and it must be very pleasant to any intelligent farmer to see the written and recorded experience of his brother farmers upon every possible subject connected with their common calling. So much for my introduction. I will now, with your permission, lightly touch upon a few points which have lately occupied my thoughts.

First—on the subject of what is commonly called "Hollow Horn;" can't you give us a little information, as also upon the kindred topic of "wobbling in the tail."

I find that my neighbors have very loose and old-fashioned ideas on those subjects, and even the books which I have consulted have given me but little satisfaction. Last year a very valuable young cow, the finest in appearance on my farm, was attacked with one or both of these maladies, (for I believe they constitute but one and the same disease) and after cutting off the poor creature's tail, boring her horns, giving her cow powders, decoction of boneset, putting pepper and salt in her horns, rubbing her back with turpentine, &c., &c., she eventually recovered, but became useless for the pail, from the fact of her bag utterly withering up. In fact, two of her udders mortified and sloughed off. During the course of the treatment we

did every thing we could think of to lessen the swelling and induration, which from the first affected the whole bag, but all to no purpose. I afterwards fattened her and sold her to the butcher. Now, I should like to know the philosophy of this obscure disease, and the exact course of treatment best calculated to effect a cure. I believe it generally arises from a bad cold contracted at the time when the cow is giving her maximum of milk, or soon after she has been weaned from the calf. One of my neighbors supposes it to be a kind of "milk-fever." Coldness of the horns is said to arise from defective circulation; and though an old German assured me he cut a "wolf" out of her tail, the bleeding in the tail, is only beneficial (the books tell us) from its effect on the vascular system.

Some years previous I lost a fine young cow from her having been turned in the fall of the year, during rainy weather, into a field full of corn-stalks. She swelled up, became constipated, and died in great pain, although I procured the services of a professed cow-doctor. In short, any information you can give us about the Cow, her physiology, her management, her diseases, &c., &c., I am sure will prove useful and interesting. You have already furnished us with some good articles on that subject, but none of them, either individually or collectively, constitute the exact thing needed. The article under the head of "Dairy Farming," is excellent in its way, particularly the practical directions for building a cow-house, but much of it is applicable rather to England than this country. To convey some idea of what I mean, you recollect a series of articles published in your Journal some years since "on the Hog;" a similar series on "the Cow," would, I think, exactly meet the wants of the farming community.\*

Secondly—As I consider your office in Baltimore as one of the principal centres of Agricultural information in the United States, I hope you will do all in your power to keep prominently before the public the purchase of the Mount Vernon Farm and the establishment thereon of an Agricultural College by the United States. It is a magnificent site for such an institution, and the historical associations connected with it render it doubly desirable.

Might we not have a governmental U. S. College of Agriculture, somewhat analogous in its organization to the Military Academy at West Point? Might not one of its objects be to educate professors of the science of Agriculture, who might afterwards fill situations in the State Colleges? Would not the spirit of Washington, if permitted to have cognizance of the affairs of earth, hover with peculiar interest around such a spot, consecrated to such a purpose? Would not the mental and physical training at such an institution do more than any other to develop the full powers, both of mind and body? Independent of its interest to the farmer, it is a scheme which should excite the enthusiasm of all classes of the community. Such a College or University, (if you choose to call it so) once firmly established and properly organized, there would quickly be an institution on a smaller scale in each State in the Union, all affiliated together—all working in beautiful unison, and all bound together in striking analogy with the general frame-work of our government. Is not the farmer quite as useful a member of society as the soldier?

\* Our correspondent will find in the papers we are now publishing, on Dairy Farming, and those to follow, the information he seeks.—Eos.]

And is not our country as much interested in establishing an institution for the advancement of Agriculture, as for that of Military science? For myself, even though I intended my son to follow some other profession, I would rather have him educated as a farmer at such a college than at any other, because I think he would be more likely to commence his career in the world, *healthy, manly and virtuous.*

Yours respectfully,

THOS. E. VAN BIBBER.

**THE FARMER IN NORTH CAROLINA.**—We are daily receiving additions to our list from the Old North State, and such testimonials as the following, from an old subscriber in Perquimans County, are well calculated to cheer us on in the good work in which we are engaged. In remitting for several years' subscription, Dr. J. adds:

"It is due the American Farmer, that I should add my little testimony in behalf of its results.—Without such a valuable aid, I am well satisfied that I should have been out of pocket hundreds, nay thousands of dollars. No paper, periodical, or essay, is a more acceptable visitor to my sanctum, and none do I more cheerfully, and with such avidity, peruse over and again. May its success, and the efforts of yourself, gentlemen, in attempting to systematize and simplify agricultural science, be crowned with the choicest of blessings! I have the honor to be, very respectfully,

Your obed't serv't, ROBT. C. JENKINS."

From another in Lenoir Co., with a new subscriber, we are favored with the following flattering testimonial:

"I hope and think, that a great many more of our North Carolina farmers will take your paper—it has been of great value to me. I think it has been the great cause of my finding a marl bed upon my farm, which I think is worth several thousands to me; every application that I have made upon my land has doubled my crop.

"Farmers here are very much in the spirit of improvement—I never saw so many compost heaps of manure in my life—every body is for making cotton here—there will be double the quantity planted that has ever been known in this county.

"I hope some of your intelligent correspondents will write you more upon the management of cotton; I did not plant one acre last year, but intend planting 100 this year."

JNO. A. PARROTT.

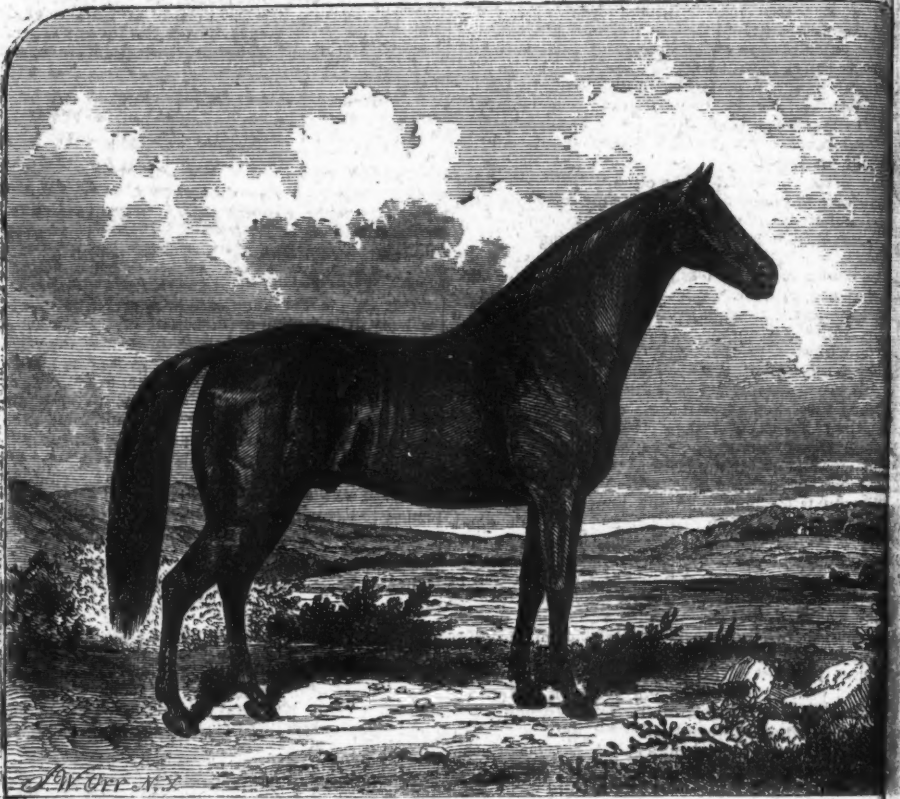
**OATS AND PEAS AS A PREPARATION FOR THE WHEAT CROP.**—A correspondent at King George C. H., Va., under date of 12th March, says:—

"I was pleased to notice your remarks upon the practicability of sowing oats and peas together, as a good preparation for wheat, and had intended writing an article on the subject, but other and more pressing engagements together with indisposition have interfered to prevent it until too late for the present season. From experiments made by me, I am so well satisfied of its entire feasibility, that I am resolved to pursue it as a system, not only because it is good within itself, but at the same time to avoid the imposition of the odious and iniquitous monopoly which our government has so long and so disgracefully submitted to, in Peruvian Guano.

C. M."



## EMPEROR.



IMPORTED AND OWNED BY W O. C. RIVES, Esq., CASTLE HILL, VA

Emperor is of a breed of horses, *Cleveland Bays*, which have been celebrated in England for their superior elegance and usefulness for more than a century past, and, of late years, have been much improved by cultivation and careful breeding. He was bought in 1852, when a year old, by Mr. Rives from the French Government, which had imported both his Sire and Dam from England for the improvement of the native stock of Horses in France. The amelioration of the race of Horses in that country being a branch of the public administration, no expense or pains are spared in obtaining from other countries, and especially from Great Britain, the very best specimens of the best breeds for crossing upon their own stock. The Sire and Dam of Emperor were selected with great care in England, through the personal services and judgment of the French Inspector-General of Agriculture, being both pure *Cleveland*s of the Improved Breed, as their pedigrees attest, and were placed at the National Haras of Versailles, where Emperor was foaled the 15th day of March, 1851.

He is, therefore, now just six years of age. He is a deep rich bay, with black legs, and no white except a small natural spot where the saddle mark

usually appears, standing about sixteen and a half hands high, distinguished by great symmetry of form and grandeur of appearance, splendid action as well as immense power, and perfect docility of temper. He has received three First Prizes, in different classes, from the Virginia State Agricultural Society; and at the last Annual Fair of the Society, though as yet but imperfectly trained, beat with great ease, in a contest of speed in harness, all the horses that were matched against him, and among them two Northern Horses that had acquired much reputation as fast trotters.

The accompanying engraving is from an elaborate and excellent portrait of Emperor, executed in oil, by an eminent artist. It presents at once to the eye of the experienced judge, in the slanting shoulder, high withers, deep capacious chest, powerful arm and knee, muscular loins and quarter, length of lever between the hip and hock, and the perfect form and position of the latter, together with the clean, sinewy, bony limbs, and well proportioned feet, a combination of points which make him, of necessity, a *great goer*; and it is confidently believed that there is no horse of his size and age in America that can compete with him in trotting.

speed, or the squareness and ease, as well as rapidity, of his movement. The rotundity of his figure, as represented in the engraving, is the result of natural structure—particularly in the ribbing of his barrel—and of his muscular development, and not of condition, for he was in reduced working order when his portrait was taken. The compact shape of his back shows that he is master of any weight, while his tapering arched neck, and light lean and lofty head, impart to him superior style and a commanding air. His fine constitution keeps him at all times in perfect health, and gives him a faculty of endurance as remarkable as his speed.

His colts have attracted great admiration; and their uniform and marked resemblance to himself and to one another, exemplified strikingly in their invariable bay color, whatever be that of the dam, proves that he possesses, in a superior degree, the power of transmitting his qualities to his offspring,—the natural and well understood result of the unmixed purity of his blood, and of the antiquity of his race. The great desideratum in the improvement of our American breeds of Horses, so as to qualify them alike for elegant and useful purposes, is to unite strength with action, power with speed, endurance with spirit, efficient service with fine form and appearance; and it is believed that no means of supplying this desideratum has yet been offered to the country, of so practical a character, and such certain success, as the employment of a horse of the qualities, strain and race of the one described.

The following extracts of a letter from M. de Ste. Marie, Inspector-General of Agriculture in France, respecting the sire and dam of Emperor, with the official statement of his pedigree, under the authority of the Department of Agriculture and Commerce, are annexed as interesting and authentic vouchers.

"PARIS, May 14, 1852."

"I bought *Cleveland*, Sire of your Colt, from Mr. J. Shaw, residing at Acomb Hall, near York.—He was then four years old, and warranted *pure Cleveland*. Mr. Shaw is one of the greatest dealers in Horses for the Stud in Yorkshire, particularly Coaching Horses. It was he that sold me *Rubens*, whom you saw at Versailles, the First Prize of the Royal Agricultural Society of England."

"I purchased *Georgette*, Dam of your Colt, from Mr. George Burton, who resides at Water-Fulford, also in the neighborhood of York. She was winner of a First Prize at the Show at Naburn, in 1848, and had at her side when I bought her, in September, 1849, a colt six months old, for which the owner asked one hundred guineas. Mr. Geo. Burton is brother and neighbor of Mr. William Burton, a celebrated breeder of fine horses living in the environs of York, owner of *Rimphon*, and of whom I bought *Caligula*, one of the Stallions at Versailles."

"I sincerely hope the Colt you have bought of us will succeed in your hands. He will, I am sure, receive from you the care and attention of which he is worthy."

"His Sire has been exercised in harness at Versailles for two years. He has perfect action.—His temper is docile. He never tires, and no weight discourages him."

(Signed,)

L'Inspecteur-General de l'Agriculture,

"LEFEVRE DE SAINTE MARIE."

*Pedigree*.—"Emperor was got by *Cleveland* out of *Georgette*, both of the pure *Cleveland* stock.—*Cleveland* was by *Master George*, Dam by *Barnaby*—*Georgette* by *Alexander*, Dam by *Golden Hero*.—*Georgette* is the mother of several Stallions sold in England at very high prices."

The Colt she had at her side, at the time of her purchase by M. de Ste. Marie, in September, 1849, was afterwards bought by the Spanish Government.

"*Emperor*" stands for the season at Mr. Rives' Castle Hill Farm, Albemarle County, Virginia, at \$50 the season. Further particulars can be had by addressing S. A. Gilbert, agent for the proprietor, Cobham P. O., Albemarle County, Virginia.

#### POINTS OF A GOOD HORSE.

The New York *Spirit of the Times* has the following directions for examining the condition of a horse:

In purchasing a good horse, sight, wind, feet and limbs must be the uppermost objects of inquiry; for nine horses out of ten are defective in one of these particulars. First, then, examine his eyes, and do this before he comes out of the stable; see that they are perfectly clear and transparent, and that the pupils or apples of the eye are exactly alike in size and color. Next examine his pipes; if good and sound, on being nipped in the gullet, he will utter a sound like that from a bellows; but if his lungs are touched, and he is broken winded, he will give vent to a dry, husky, short cough.—Look to his limbs also, and in passing your hand down his legs, if you find any unnatural protuberance, or puffiness, or if in feeling first one leg, then the other, you discover any difference between them, disease more or less is present; he may not be lame, but he is not clean upon his legs. If he is broad and full between the eyes, he may be depended on as a horse of good sense, and capable of being trained to almost anything. If you want a gentle horse, get one with more or less white upon him; many suppose that the particular colored horses belonging to circuses, shows, &c., are selected for their oddity; but it is on account of their docility and gentleness; in fact, the more kindly you treat a horse, the better you will be treated by him in return.

STATE AGRICULTURAL SOCIETIES.—The Annual Show of the Pennsylvania State Society will be held 29th and 30th September, and 1st and 2d of October—place not yet chosen.

The Kentucky State Society's Show will be held at Henderson, on second Tuesday in October.

The Maryland State Agricultural Society's Show will be held on the 21st to 25th October; and the Virginia State Show the following week.

Canada East, at Montreal, September 16, 17, 18.

New-York, at Buffalo, October 6, 7, 8, 9.

Ohio, at Cincinnati, September 15, 16, 17, 18.

The U. S. Agricultural Society will hold its exhibition at Louisville, Ky., Sept. 5.

Queen Anne County, Md., Agricultural Society, have appointed the following officers for the ensuing year: C. I. B. Mitchell, President; J. B. Harper, Treasurer, and B. Emory, Secretary. The society is in a flourishing condition, and will be of much advantage to the farming interest of that county.

## EFFECTS OF SNOW ON WHEAT.

To the Editors of the American Farmer:

ELLENDALE, VA., March, 1857.

DEAR SIR:—Your partial exposition of my theory of snow upon wheat, as published in your number for this month, may cause it to be misapprehended, and subject me to unmerited criticism, as what appears there was only a sequel to what I had written before, and has but little reference to the position I had advanced, and which you did not approve. This, you will recollect was, that a light covering of snow, sufficient to protect the grain from the intensity of frost, and yet to admit of the surface being frozen, was preferable to a heavy coat, which, in addition to the liabilities to injury to which it subjected the plants, as enumerated in the published article, might have the effect of preserving in embryo, or larva state, the insect so fatal of late years to this product, while, at the same time, by keeping the plant in a growing and tender state, it afforded its enemy food and protection in advance perhaps of its natural season, thus enabling it to commence its depredations earlier in the spring and to prosecute them with more vigor. May not the snow in this wise, be to the weevil in the spring, what early seeding was considered to the fly in winter, the means of affording it subsistence; to obviate which you will recollect, it was customary in former times to postpone the seeding of wheat until October, that its growth might be retarded, and shelter and nutriment thus be withheld from its enemy. To avoid Blight and Rust, supposed to be the consequences of thus prolonging the ripening of grain, as they probably were, we were induced to depart from this custom, and early seeding has of late years been in vogue, so that the earth, protected by the growing wheat, which has made sufficient advance for this purpose, from the light frosts of autumn, and subsequently by a heavy fall of snow from the more penetrating congelations of winter, is kept in condition favorable to insect preservation during its season of inertness, and to its vitality when the return of spring calls this into action, while the plant, made tender and succulent by this forcing process, is in a state to furnish food of just such nature and consistency as is required by an adversary growing with its growth, and preparing to prey upon it at maturity.

Frost, for aught we know, may be to vegetable what it is, in some instances, to animal condition: a suspension of vitality during the season unfavorable to its exercise; a hibernation not designed to be disturbed, as is the case when subjected to frequent thawings and freezings, by heavy falls of snow, which protect and expose alternately.—Moreover, these are accompanied with excess of moisture, greatly augmenting the injurious effects of cold, and rendering the frosts of spring which succeed any occasional thaw, more fatal to vegetable life than the icy constancy of winter, accompanied, as it is, with dryness. A permanent freeze suspends animation, deadens the sensibilities, and closes the organs through which life may be assailed in such subjects, as cold benumbs, but does not destroy, and these are usually more secure, if permitted to remain torpid until the genial season of revivification restores them to activity, than if disturbed during the period of repose, only to subject them to the detriment of relapse. Frost is preservative, during its continuance; the danger is in its sudden removal and return. I have had

large quantities of barrelled apples to remain frozen during the entire winter, and to come out fresh and sound, with the gradual warmth of spring; whereas, such as were brought suddenly to light and heat, rotted almost instantly. Our forest trees are seldom affected by a long winter of unremitting cold, but let there be a warm spell in its midst, and they crack, split, and, in many instances, either perish, or are materially injured. And why?—because the thaw supplies moisture to occasion sudden distension of the capillaries, whilst the cold is still sufficient to arrest growth and prevent circulation and absorption. To this unnatural condition I incline to think a heavy covering of snow renders growing wheat liable, and its removal subjects its roots and sap-vessels to like injuries, from which a frost bound surface, and a less ponderous mantle, would perhaps have exempted them.

We are having at present, and, indeed, have had throughout the winter, precisely such snows as, in my opinion, are favorable to the wheat crop.—Never more than three or four inches deep, and always in time to protect the surface from excessive cold, but not sufficient to prevent its being frozen. Should this state of things continue to favor us until the spring is fairly established, its effect on the crop will test the truth or fallacy of my theory.

Yours,

W. B. H.

## GUANO.

LINDEN, VA., MARCH, 1857.

To the Editors of the American Farmer:

No one will accuse me of a desire to do injustice to the Peruvian agent. As you will remember, I interposed in his behalf on a late memorable occasion, against an organized combination, which was honestly sustained by many of my best friends, but which seemed to me, inconsistent with the spirit of the age, and the principles of free trade. The intimation that he designs still farther to advance the price of guano, demands of the whole farming community, that they seriously consider, what course it becomes them to pursue in such a contingency. On this point I proceed frankly to state my own views: For myself I am resolved not to purchase a pound of guano, at any price higher than that of the last season, and only half the usual supply even at that price. I shall act in this manner from no vindictive feeling towards the agent, but because I am convinced, under present circumstances, the article is not worth the price now paid for it, and I am not willing to permit my pride as a farmer to induce me to do that which will probably enure to my own loss, and still more to that of others. If every farmer who concurs in this opinion will firmly act upon the resolution, the remedy for the evil complained of will be speedy and complete.

The farmers have for several years been carrying on a ruinous double competition among themselves, first in the purchase of guano, and then in the sale of wheat. This has been greatly increased by the ardent zeal for improvement, now extensively diffused through the country. It is high time that this ruinous policy should cease. It is perfectly obvious that we cannot afford to make wheat at the present prices of wheat and guano. The general embarrassment of the farming community is conclusive evidence of this fact. We had better let our lands lie fallow for a year, raising merely enough grain to pay taxes, and for home consumption, than continue this ruinous competition.



The Dutch in the East Indies are said, when the supply is in excess, to burn one half of their spices, to enhance the value of the remainder. Now this policy may be questionable, but it should at least teach us the folly of competing for the purchase of manure, still farther to increase the supply of grain, when that supply is already excessive.

I know gentlemen whose crops of wheat last year, brought them largely in debt; who after giving their land and labour of their slaves and teams for nothing, did not realize enough for their crops by several hundred dollars, to refund the money paid for the guano and seed wheat; many others realized little or nothing on labour or capital. Such a system, it is obvious, cannot last long—but that it is sustained by hope and pride, it would cease at once. So long as it continues it must be productive of distress if not ruin.

The political papers are filled with accounts of the Exodus of the slave population from Eastern Virginia and Maryland. The causes of this movement are readily explained. The extreme severity of the two last winters, the precariousness of the wheat crop, the high price of labour, the low price of grain and the high price of guano; these simple facts render any deep political speculation as to its cause entirely unnecessary. Even the strong tie between master and slave, will not long keep labourers in Maryland and Virginia, actually earning nothing, who will readily bring in the market from twelve to fifteen hundred dollars. In this view the guano question is one of deep political as well as personal interest.

I do not design the remarks which I have deemed it my duty to make, to ensure to the benefit of vendors of other varieties of guano and artificial manures. I have tried all the varieties of Mexican, Patagonian, Colombian, Chilean, several varieties of African, and De Burg's Super-Phosphate, and Chappe's Fertilizer. According to my experience Peruvian Guano even at the present price is cheaper than any of them. Those who have experienced different results, will of course conform their practice to their experience rather than mine.

I have deemed it my duty to make this frank communication of my views to my brother farmers, on a subject of vital interest. I have no desire to interfere with the interests or business of any man, yet I should have been wanting in candor, and fallen short of my duty, if I had suppressed my opinion on any part of the whole subject.

WILLOUGHBY NEWTON.

#### THE GUANO MONOPOLY—PEA CULTURE.

To the Editors of the American Farmer:

GENTLEMEN:—The agents of the oppressive Peruvian monopoly seem to have forgotten that "there is a point where submission and patience ceases to be a virtue," as well as that in this age of Young America, the spirit of independence beats as high as during the reign of the short lived and odious stamp act; they also forget that necessity is the mother of invention. I rejoice to find that the "Bone and Sinew" of the country are "waking up" to their interests, and that the days of Peruvian monopoly and oppression are numbered. I for one, sirs, believe, and I know I am not alone, that the Super-phosphates, with the Pea fallow, are doing and destined to do more for the improvement of our worn-out lands, than all the cargoes that have been, or may be brought to our shores from the Chincha Islands, and certainly at a very much less expense.

As the farming interest is being attracted pretty

generally to the Pea culture, and it seems to be obtaining general attention, I would like to be advised as to the best pea to be used, with an eye to improving the soil, and also as to the best mode of cultivation for securing a crop of seed; and the time of planting, and where to be obtained. These are inquiries of much interest to the agriculturist of this section, as there has been much difficulty in getting peas for broadcast sowing, and the price demanded per bushel, (\$1.25,) I think enormously high. At this rate would it not be a double paying crop—the vines improving the soil, and the seed the pockets? Will you confer a favor on an old subscriber by giving your views on the above?

AN OLD SUBSCRIBER.

N. B.—The kind of Pea sown with us has been the Black, and the small yellow pea, designated Clay Pea, (Cow Pea.)

I hope the Rev. J. Fife will continue to enrich your columns by his contributions. He is one of Albemarle's most practical farmers. Well do I remember the barren appearance of the fields he has reclaimed by the Pea culture. If more of our farmers would imitate his example, in a quarter of a century there would be few barren fields around our homesteads.

[The chief reason for preferring the Black Pea, we believe is its earlier maturity. The Clay Pea makes more vine, but takes longer to ripen; in our correspondent's latitude, this latter difference would not be material. These, we think, are about the best varieties, but failing to get them, we would not hesitate to use any others that might be got at a reasonable rate. After numerous attempts, we find that the Black Pea is not to be had at Norfolk, where they have been usually obtained, at any price, and other sorts very high. Since attention has been called so especially to the subject of Pea-culture, the price of seed has been about doubled; and we hope that those who desire to use them, will raise their own seed the coming year.

When raised mainly for the seed, it is better to plant in drills three feet apart, and give two or three workings with the cultivator. It is necessary to gather the pods by hand, as they ripen, to have the seed sound and good.

We join in the wish of our correspondent, that the Rev. Mr. Fife will favor us with frequent communications.—EDS.]

GREAT SALE OF SHORT HORN CATTLE.—Mr. Samuel Thorne, of Thornedale, has bought the entire Herds of Col. Lewis G. Morris and the late Noel J. Bear. The Thornedale Herd will now be the finest Herd of Short Horn Cattle in the world—and there can be no need of going to England to secure the best Short Horns, whether blood or quality is desired. These Herds will be removed to Thornedale in June. We understand that Mr. Thorne will have about thirty females for sale, as well as some very superior bulls.

We acknowledge the receipt of 3d vol. of Transactions of the Pennsylvania Agricultural Society, containing the proceedings, &c. of that Society for 1855.

Also from Eben Wight, Esq., corresponding Secretary of the Massachusetts Horticultural Society the reports of committees for 1856, and schedule of prizes for 1857.

# AMERICAN FARMER.

Baltimore, April 1, 1857.

## TERMS OF THE AMERICAN FARMER.

Per Annum, \$1 in advance—6 copies for \$5—13 copies for \$10—30 copies for \$30.

ADVERTISEMENTS.—For 1 square of 8 lines, for each insertion, \$1—1 square per annum, \$10—larger advertisements in proportion—for a page, \$100 per annum; a single insertion, \$15, and \$12 50 for each subsequent insertion, not exceeding five.

Address,  
**S. SANDS & WORTHINGTON,**  
Publishers of the "American Farmer,"

At the State Agricultural Society's Rooms, 128 Baltimore-st.  
Over the "American Office," 5th door from North-st.

A CHANGE has been made in the location of the office of the MARYLAND STATE AGRICULTURAL SOCIETY, from the Hall in the *third story* of the American Building, to a room in the *SECOND STORY* of the same house. The office of the AMERICAN FARMER is also changed to the same place. Our friends who have demurred to our *high* position in the premises, will no doubt be pleased with the change, as it will save them the necessity on visiting us (and we are always happy to see them) of ascending but one flight of steps.

Among the papers of interest in this number we would call attention to those upon the subject of a State University of Agriculture.—They are from the pen of a devoted friend of education, who feels a deep interest in every thing calculated to advance the sum of human happiness. They originally appeared in the "Patriot" of this city, and are transferred to our pages by special request.

The article on the subject of Circular Saw Mills, we also commend to the attention of our readers—Page's Mill, manufactured in this city, to which allusion is made, has attained a celebrity throughout the Southern and South Western States, which has kept up a continually increasing demand for it, and the manufacturers have been obliged very largely to increase their facilities to meet the requirements upon them. Notwithstanding many attempts have been made to introduce other Mills upon the same principle of Page's, yet we doubt if any very near approach has yet been made to the perfection of the one alluded to.

**TRIAL OF REAPERS, MOWERS AND OTHER HARVESTING MACHINERY.**—It will be seen by the proceedings of the Executive Committee of the Md. State Agricultural Society, that a trial of ma-

chinery has been determined on, at the ensuing harvest, and the sum of \$500 has been placed at the disposal of the Committee which has been appointed to make arrangements for the trial, to be awarded at the discretion of the Judges, who may be appointed to superintend the same. The Committee consists of Col. G. W. Hughes, of Anne Arundel, M. T. Goldsborough, Esq., of Talbot, Jas. T. Earle, Esq., of Queen Anne's, and in pursuance of authority vested in him, the President has added the names of Hon. Jas. A. Pearce, of Kent Co., and Jno. Merryman, Esq., of Baltimore Co., three of whom to constitute a quorum, with power to designate the place, time and manner of holding the trial. "It being understood that specimens of the winning machines and implements are to be exhibited by their respective proprietors, at the annual exhibition of the Society, to be held near Baltimore, next October, at the close of which the premiums awarded will be paid to the successful competitors, who shall have fully complied with the regulations established by the committee." In our next we expect to be able to present the arrangements of the Committee.

**THE CLEVELAND BAY HORSE.**—In the admirable Prize Essay on the *Horse*, published in our last, the writer gives a decided preference to this breed of horses over all others, but supposes it is not within our reach. We have the pleasure of informing him that the Cleveland, in its purity, is to be found in our sister State—and we are enabled, in our present No., to present to our readers an engraving and description of one imported by the Hon. Wm. C. Rives, of Albemarle County, Va., on his return from his mission to France. This animal is a very superior specimen of the stock, as the evidences we give will fully prove, and we have no doubt that the public spirited gentleman who has introduced him into our country, will, in addition to the satisfaction he enjoys of having done the State good service in this respect, as he had before in his official capacity, will be richly rewarded in witnessing the improvement upon this valuable race of animals, so important to our domestic comfort.—There is no estimating the benefits which even a single animal of this description can confer upon a nation—proofs of which, in the history of the past, will readily present themselves to the mind of the reader.

## SURFACE MANURING.

The great fear of loss of ammonia by the surface application of manures, has received the attention of Dr. Voelcker, Professor of Chemistry in the Royal Agricultural College, at Cirencester, England. In an essay on the subject he asserts, that no loss arises from spreading manures on the surface of a field. On the contrary, he asserts, that if spread upon the field, and allowed to lie until washed with rains, it is more beneficial than to plow it in at once. When spread out on the field fermentation is stopped, and volatile matter

ceases to escape. In the case of clay soils he remarks: "I have no hesitation to say that the manure may be spread even six months before it is plowed in, without losing any appreciable quantity of manuring matters."

We have been long satisfied by personal observation and experience, that the necessity of ploughing under manures immediately to prevent waste has been greatly exaggerated. We know that very many of the most intelligent practical farmers, will bear us out in recommending the practice of applying all long unfermented manures on the surface of grass lands, as the most effectual and economical method of using them. In an article upon the subject in our number of last May, approving of the practice, we used these words, "we know that teachers of science will shake their heads over the wanton waste of ammonia, but we cannot help it. These suggestions will stand the test of trial, and practical men must stand by their facts. If the Doctors do not understand how it is, let them bide their time. When Science becomes more familiar, she will explain it to them." We are glad to have our opinion supported by the high scientific authority of Professor Voelcker.

In this connection we call attention to the theory originally suggested by Mr. Clemson in a communication to our Journal, to explain the well known fact of the highly fertilizing effect of a covering upon the surface of the soil, viz: that such covering becomes a nursery for myriads of insects which breed, pass their brief existence and perish beneath it—furnishing the soil both ammonia and phosphoric acid, in the best state of preparation for immediate use.

A correspondent of *Miner's Rural American*, makes the following statement which seems to accord with this theory: "In Oct. '54, I hauled manure on an old meadow that had run out and had little on it but June grass. A part of the manure was spread and the balance was left till the January thaw. When the manure was spread in the Fall, the grass sprang up and continued green till the snow fell. In the spring there was a marked difference between that and the rest of the meadow, and when the grass was cut that part yielded double the amount of hay of any of the rest, and in the Fall it came up thick with clover, and yielded a good crop of seed. Where the manure was spread in the winter and spring it yielded very little benefit. When manure is spread upon grass lands, previous to the fall rains, the beneficial effect is soon visible, but after that I have never seen much advantage from top-dressing." Assuming the theory of Mr. Clemson to be correct, the warmth and moisture of the early fall rains would be essential to the generation of insects, worms, &c., whereas the winter and spring dressing would be too late for any such effect in time for the first crop.

Whatever the true theory may be, there is no

doubt whatever of the importance of surface covering in enriching soils. Many farmers attribute the great effect of clover culture, to the practice which they rigidly observe, of allowing the crop to attain its full growth, and then to be trod down by stock upon the surface, to get the benefit of the covering.

NOTE.—The reader will observe an apparent inconsistency in the views maintained in this article, and the recommendation on the same subject in the work for the month, based upon the received doctrine on the subject of ammonia. The junior Editor thinks proper therefore to assume exclusively the responsibility for this article. His opinions are based not upon any doubt of the value of ammonia, or its liability to some loss by exposure on the surface, but he thinks that, absorbed as it is by a large mass of straw and other litter, the actual loss is usually exaggerated, and more than compensated by the great value of the surface covering.

#### HIGH FARMING.

Mr. Fay, of Boston, in one of the Legislative Agricultural discussions, urged the importance of liberal manuring. He thought soils should have at least half of one per cent. of organic matter. He advised high manuring as the only means of making farming pay. He related a case of "high farming," which came under his observation in Scotland. A farmer rented six hundred acres of land, which twenty years ago was not worth two shillings rent per acre, it now rented for two pounds per acre. The farmer consumed everything but his wheat, on the farm, wheat averaged thirty-two bushels to the acre. He produced twenty tons of turnips, (bulbs only) to the acre, on forty acres—fatted 600 to 700 cattle annually, all the manure from which, was carefully saved and applied to the land, and in addition, he used \$1500 worth of Guano, and \$600 worth of bones every year. This system required high courage, good judgment, and a good deal of money, but it paid there, and Mr. F. believed it would pay here.

Such a statement is well calculated to astonish those of our farmers whose constant practice is to sell off everything from the farm, but what is absolutely essential for the working stock, and usually leaving them but a scant supply; and allow one half of the manure made by these to be wasted by careless management. They think they do well when they spend a few hundred dollars for guano, &c. But here is a tenant farmer paying a high rent, who carefully saves and applies the manure from six or seven hundred cattle, and spends two thousand dollars a year besides for guano and bones. He thinks his manures enable him to pay his rent. He can't afford to do without them.

The high prices of all sorts of farm stock, present and prospective, is a sufficient inducement to our grain and tobacco and cotton growing friends to mix their husbandry more and give a



larger portion of their attention to stock raising. They should not increase their live stock, without making special provision for it. Very many are already overstocked considering their means of support. But they should devote a portion of their lands to grass and other crops for feeding stock, and by judicious management and a proper care of the manure, they would soon find that the less extent of land devoted to cropping would give as much return with less labour, and the profit and pleasure of the stock would be so much extra.

#### FARM HORSES—HOW TO BREED THEM.

Donaldson, in his admirable work on Manures, Grasses, &c. throws out incidentally, the following hints, as to how the best breed of horses for farming purposes, may be produced. His remarks, of course allude to English horses; but still the suggestions, which he makes, may apply just as well, and be availed of by our countrymen, to as great advantage, in the improvement of our horses, as to those of England. The general principles which he lays down so briefly, but so clearly, are just as applicable here, as there; and as there is great room for improvement with us, we hope that his suggestions will not be lost upon those of our readers, who may be in a position to make the experiment. Self interest, it is said, is the moving spring of human action, and if this apothegm be true, there is every inducement held out by the present high prices and present active and increasing demand for good horses, for gentlemen of large landed estates, to enter upon the breeding of horses, as a means of farm economy and profit. But we hold it to be demonstrably true, that good pastures are indispensable to success in breeding fine animals, and that it is equally true, that their winter provender should be of a character to preserve the young animals in good growing condition. In saying this, we do not mean that the colts should be kept fat; but we do mean, that their food should be of such quality as to dispense to them those substances which form bone, muscle, tendons, &c., in order that the moving principles of growth, increase of size, and the full development of the whole system, may be healthfully and actively carried on, till the animals shall attain their full size, and the perfection of all their parts. We have always been opposed to the *demi-starving* system of raising colts, as advocated by some; for we looked upon it as being as unphilosophic as it was repugnant to our views of humanity, to stint a young animal in its food. We believed, and still believe, that, to build up the frame-work of a colt, or any other animal, in completeness in all its parts, the breeder must furnish him with the materials, in the form of wholesome nutritious food, to do it with, and that such food must be regularly

provided, from the time of his being weaned, until he arrives at the age of maturity; that during winter, when confined to his yard, his supply should be regular, and given in such quantity and of such substances as to preserve him at all times from the sensation of hunger, and to impart to him those nutrimental substances best adapted to sustain him in vigorous good health. And we know of no food readily available, better adapted for these purposes, than good crushed oats, mixed with cut hay, occasionally changed to cut straw, messes of chop and corn meal and cut hay or straw, with occasional messes of cut carrots mixed with wheat or other bran and cut hay.

In our view, the colt should be provided with a good dry comfortable shed, facing the south, access at all times to a dry yard, with a Southern or South-eastern exposure, and that, if there were not a constant supply of soft water in it, he should be regularly watered three times a day, at stated hours; so that he should not suffer for want of protection from the elements, from stint in his food, nor for the want of water. Under such auspices, the young animal could not fail to prosper, and as a consequence, the elaboration of his entire system would be carried on healthfully and vigorously. And we would, also, give him an ounce of salt thrice a week, to keep up healthful action in his digestive organs.

We have thought it too, a cause of reproach upon many farms where we have been, that the brood-mares were generally old, broken down animals, with their wind broken, spavined, and sometimes string-halt. With such defects the rational presumption is, that they could not fail to transmit to their progeny similar defects, or a constitutional pre-disposition to them at an early period of life. If one aims at raising a fine animal, he should, in the selection of the dam, provide such a one as was free from all defects, one of the right form, to produce such a colt as would insure the fulfilment of the purpose and object had in view, in breeding him. The selection of the stallion too, should be made with judgment and great discrimination; he should be free from blemish or defect; be constitutionally sound, and of a form, size and spirit, calculated to ensure a foal to answer the ends looked to by the breeder. Many through mistaken ideas of economy—to save a few dollars in the price fixed upon for the services of the stallion—send their mares to inferior horses, and lose the chance of getting valuable colts, whereas, had they sent them to a superior stallion, such a one as was calculated to transmit his own valuable qualities and blood to his progeny, their colts would have been all that they could have desired, reflected credit upon their skill as breeders, and proved

a source of profit, whereas on the other hand, through their parsimonious policy, in denying to their mares the services of a proper stallion, they were losers in fame as well as in pockets.

With these remarks we append the Extract from *Donaldson*, alluded to in the beginning of this article. He says:—

"The best breed of horses for farming purposes should be light, sinewy and active, high in figure and light in carcass, with much spirit and strength. An excellent sort may be obtained by selecting a choice brood mare of the black, brown or grey colour, large in body and well shaped, carcass roomy, and bone thin and flat, and as clean from hair as possible; one cross from a strong thorough bred male would produce an offspring combining strength and action, and possessing power and the spirit to exert it on strong lands, and quickness of motion for light soils and for work which requires a rapid execution, without being encumbered with the heavy lumbering carcass which is erroneously thought to constitute strength. The female will impart size, strength, and vigour of constitution capable of any work that may be required, and the male will supply spirit and muscle to put the strength in action in any instance of time and purpose. This breed would be invaluable if judgment and discrimination be used in selecting the parents, especially the female; the progeny suits many purposes, and a further cross removes them to the hunting stud."

#### THE APPLICABILITY OF CHEMICAL ANALYSIS TO THE IMPROVEMENT OF THE SOIL.

The theory upon which is based the analysis of soils, with the view to their amendment is so simple and beautiful, and promised results so important that it is hard to give it up. Men of science, and intelligent practical men, were alike enamoured of it. It had been established that certain mineral elements were essential in greater or less degree to every fertile soil. Analysis was to determine their presence, their deficiency or their absence, and indicating just what was wanted, to save the cost of applying what was not wanted. It would be no longer necessary to apply fifty cart loads of manure to fertilize an acre of land.—Chemical science, by distinguishing between the essential and the non-essential, would enable the farmer to carry in "his breeches pocket" just the dose which any given crop might require. The use of Peruvian Guano with its marvellous effects from very small quantities, coming into notice when this theory was in full blast, tended to give it force among practical men. And now when the most reliable men of science have abandoned soil analysis as impracticable for ordinary purposes, we find the latter to some extent still hoping against hope. As we write for these, it is our duty to put them in possession of the best opinions on the subject, as we gather them from various sources.

The obstacles in the way of soil analysis as applied to agricultural improvement were set forth

first, we believe, by Prof. Booth, of Philadelphia, some four years ago. His arguments were warmly controverted then, but have stood the test of these attacks, and the more important test of time.

While the subject has been very little discussed in the mean time, the most intelligent opinion has settled quietly down upon his views. The difficulties are 1st, that of getting a fair average of the soil to be analysed. 2d, the difficulty of testing the presence of the necessary elements with sufficient accuracy. 3d, the cost of analysis, supposing the other difficulties overcome.

First, as to the difficulty of getting a sample. To say nothing of the bungling manner in which the majority of farmers would be likely to take a sample, suppose it to be done by direction and in the best manner. He must take his sample from such portions of the field as *appear* to be alike, and having got half a dozen or more parcels he must mix them well, and from the mixture get a sample for the Chemist. The Chemist from this average sample recommends a treatment for the whole field. Now if the several parcels taken up by the farmer not only *appear* to be, but *are* in the main similar, the operation is a very fair one, but it is manifest that the accuracy of the knowledge he obtains through the Chemist depends upon his own skill in judging, by *appearance* of the similarity of the parcels he mixes, from which to draw his average.

But supposing that there is such natural similarity in the various portions of the field to be analysed, as may make an average sample thus obtained a fair representative of the whole, it will readily be admitted that such a sample would be liable to be materially affected by accidental causes. In the clearing up of all our arable lands, large bodies of brush and wood are burned in heaps, and very often the ashes, not at all, or very imperfectly spread. So in corn fields, large quantities of stalks are frequently burned in heaps. Accidental deposits of bone may occur in one, and of carbonate of lime in another, and so of other mineral matters. Now as, in the course of cropping, the same draught is made upon all parts of the field, it is apparent that these spots will preserve their relative excess of potash, phosphate of lime, &c. If in getting a sample from a worn out field, he happens to strike into one of these old beds, he draws a sample abounding in potash or phosphate of lime, and mixes it with another entirely deficient. The two together will indicate a sufficiency of this mineral, and the character of the application to the whole, is determined by the accidental deposit of the ash heap, or the remains of an old cow as the case may be.

But the difficulty is much greater where the natural constitution of the soil is changing continually, as in all our rolling lands. A yellow clay knoll here, a rich dark loam fifty yards below,

then a ravine which has been gradually filling up with rich washings of fine mould, and beyond this again, another distinct soil of light colored sand formed from the wearing and washing from another course. The absurdity of mixing half a dozen of such various soils, and mixing them to get an average of the field, is apparent, yet you must do this, or make a separate analysis of each soil and subsoil. "The analyzation of soils," said Prof. Nesbit, of the Kennington Ag. and Chemical College, (Eng.), "reminded him of the man who having a house to sell, came with a brick in his pocket as a sample of the house. There might be almost fifty kinds of soil in the same field."

But supposing we get a fair sample, we have, in the second place, "The difficulty of testing the presence of the necessary elements with sufficient accuracy." This objection, made by a single chemist of reputation and standing, with no possible interest in making it, was quite sufficient to put farmers on their guard, and cause them to look well to it, lest their money be thrown away. Prof. Booth, a man of the highest standing as a man and chemist, did make the objection distinctly, on the suggestion of Maj. J. F. Lee, of Washington, whose letter the Professor quotes. Maj. L. says: "We know that on all poor land of proper texture the application of 300 lbs. of guano will produce fair crops of grain and roots, and this is the difference between a barren and tolerably fertile soil. Now this guano applies only 6 lbs. of potash, 24 lbs. of phosphoric acid, and 34 lbs. of ammonia. But an acre contains 3,920,000 lbs. of soil, (to the depth of a foot). Can analysis now, or will it in any progress, we may reasonably expect it to make, ascertain one part of potash in 600,000 parts of foreign matter, or one part of phosphoric acid in 150,000 parts of foreign matter, or one part of ammonia in 100,000? It may be answered without the slightest fear of contradiction, that such determinations are greatly beyond the present power of chemical analysis." This opinion Prof. Booth corroborates.

After an interval of some three or four years, the difficulties having been distinctly set forth, every contrary opinion having had a fair opportunity of being duly weighed, and room given for advances in chemical science, we find among various expressions to the same effect, such as these: Prof. Nash, author of the "Progressive Farmer," and now senior editor of the "Plough, Loom and Anvil," a chemist and agricultural writer of much reputation, says: "Should the time come, when the analyst can tell the farmer with any thing like certainty, what is the best and cheapest application for this or that soil, with due reference to the desired crops, and when the information can be communicated at an expense which the farmer can conveniently pay, it will be a new era in the affairs of the farm. But that time has not yet come." The editor of the "Massachusetts Ploughman," an able agricultural writer, says:—"Formerly we believed and advocated, both as an agricultural writer and as an editor, the idea that such analysis could be had; but further observations, and the experience of a few years past, have satisfied us that this cannot be done with any reliable certainty." We might multiply opinions of chemists and intelligent agricultural writers to the same purpose. We propose, however, to add only that of Professor Johnson, of Yale College. As Professor of Agricultural Chemistry, this gen-

tleman worthily fills the place of the lamented Norton, and in a few years has made for himself an enviable reputation for candor, fairness and ability.

In an address delivered before the New York State Agricultural Society in 1855, after speaking of the great hopes that had been excited that the use of Chemical analysis would be of immediate practical value, in pronouncing upon the presence or absence of the mineral elements of plants, Prof. J. says, "But these hopes have been doomed to disappointment, and although, but a few years since, in this country, many soils were analysed, and many prescriptions for their treatment, founded upon analysis were written, yet now we scarcely hear the subject mentioned, and that soil analysis can be often, or generally economically valuable, nobody who has the slightest actual acquaintance with Chemical analysis can venture to maintain." "The quantities which constitute abundance or want for the plant, lie beyond the limits where Chemical analysis are able to reach; they are far too small for it to appreciate quantitatively." "It is impossible to determine by aid of analysis between two specimens of the same soil, one of which has been mixed with a thousandth, and the other with two thousandths of its weight of plaster or guano." "A ton of guano applied to an acre could not be estimated by the analyst, and yet we know that three or four hundred pounds is a large application."

Recently we find in the "Homestead" an agricultural paper published at Hartford, Ct., a very able article on the subject which we may safely, we think, attribute to the pen of Prof. Johnson; we make from it a few extracts. "If we assert that soil analyses are of no practical value to the farmer, except in isolated cases, we but give the opinion of every Agricultural Chemist, here or in Europe, whose opinion is worth consideration.

"Consider a few facts. The surface of an acre of arable land within easy reach of the roots of crops and penetrated by them and turned by the plow, is the soil; it varies in depth from five inches to a foot, and the cubic foot of different soils varies in weight from 65 to 100 pounds. The weight of good common soil is usually 80 or 90 pounds to the cubic foot. The least gives the weight of an acre of arable land to the depth of one foot, 3,484,800 pounds; or to the depth of six inches, 1,742,400 pounds. As there are but few soils that one would be likely to have analyzed that are not tilled to the depth of seven or eight inches we may fairly take the more convenient number 2,000,000 pounds as the weight of the arable soil of an acre. Now, twenty-five bushels of wheat remove about 45 pounds of the constituents of the soil in the ash; of these 45 pounds, 48 per cent. about is phosphoric acid; this would be 21.6 lbs.; what proportion does this bear to the entire weight of the soil? Less than one ninety-thousandth; or exactly, 108 hundred-thousandths of one per cent., (0.00108). Can chemical analysis detect this difference? No indeed; we are well satisfied, if our results on two analyses of the same ash agree to the second place of decimals, in the estimation of those constituents of ashes which are easiest to determine; but with phosphoric acid if the disagreement is less than one-tenth per cent., (0.1), it is all we can expect.

"What does this prove? To our view it proves that the same piece of land can be cropped ten to



fifty years with wheat, and so far as phosphoric acid is concerned, chemical analysis cannot tell the difference.

"Take another view. A ton (2000 pounds) is the 10th of one per cent. of the soil of an acre, that is, the 1000th part of 2,000,000 pounds. One pound is 7000 grains; one ton to the acre is the 1000th of a pound to the pound, or 7 grains. In adding the quarter part of a ton (500 pounds) of guano to the acre we add less than one grain of guano to the pound, and this grain is less than one-fifth ammonia, and about one-seventh phosphoric acid. A soil is unfruitful without the guano,—analyze it. Let now 500 pounds of guano be added; the soil is teeming with fertility,—analyze it again. Will the analysis show any difference? Probably it will, no two analyses are exactly alike; but, will the 5th of a grain of ammonia in the pound taken for analysis be discovered; or the 7th of a grain of phosphoric acid? We answer; No—the quantity is too small to be accurately determined."

So much for the testimony of reliable chemists as to their ability to test the quality of soils with sufficient accuracy. It is asserted by the same authority quoted above, that supposing it to be possible, every separate analysis, (and there may be a dozen for each field) to be of any value, would cost fifty dollars.

The several propositions with which we started are thus fully maintained. First, It is impracticable to get a fair sample, ordinarily, of the soil to be analysed; secondly, It is not possible to test with sufficient accuracy the presence of the necessary elements of fertility. Thirdly, The cost supposing the other difficulties overcome, would forbid the resort to it, for ordinary purposes.

Prof. Mapes, of the *Working Farmer*, holds out very persistently for the treatment of soils, by the indications of Chemical analysis, but says that such treatment cannot be made from "Chemical knowledge alone." What he calls the "present condition" of the various mineral elements ascertained by analysis must be known, before a correct estimate of the necessary amendments can be formed.

And so the darkness is darkened. What other men of science think impossible, is not impossible to the Professor, but it is insufficient. He accumulates difficulties for others, and yet for himself he says, "We have examined the soils of hundreds of farms, and have recommended modes of treatment founded on such examinations, without ever having made an error, or having a complaint from those who employed us."

Now that Professor Mapes has fathomed all these depths, and overcome all these difficulties does not effect the argument. If when other men of more than ordinary intelligence and experience and skill, find difficulties and impossibilities, he never in the first gropings of the tyro made a mistake, he is gifted with a power of intuition which is plainly miraculous. His success is no example for ordinary men. It is a very fine thing for those who bask within the circle where he radiates, and great inducement for others to put themselves within that circle. But it argues nothing for Chemical science in its ordinary developments.

**CUBAN GUANO.**—Large amounts of guano, very rich in Phosphates, it is said, have been found on the Keys surrounding the Island of Cuba, which will probably be soon introduced here.

#### CRUELTY TO DUMB BEASTS—HORN AIL.

A correspondent of an Agricultural Journal recommends as a very "simple remedy" for the "Horn ail" to pound a lump of alum as big as a walnut, mix it with a wine-glass full of sharp vinegar, and pour into the animal's ear, alternating occasionally from one ear to another until a cure is made.

The cruelty of quackery is one of its greatest faults. The ignoramus who devises a remedy is extremely apt to suppose that its efficiency is proportioned to the torment it inflicts. The writer does not vouchsafe to inform the public for whom he writes, of any reason whatever, on which he had based the absurd and cruel experiment. He happened to guess that this combination of sharp vinegar and alum, applied in this particular way of pouring into the poor beast's ear, might do her horns some good, and the trial being made, and the animal surviving, he attributes to his quackery what was due only to the remarkable force of nature in resisting both violence and disease. Dr. Dadd, in his "Cattle Doctor," tells a story of one of these practitioners who "after trying every thing he could think of" resorted to some extraordinary remedy; and being asked the reason for it, said his object was "to wake up the cow's ideas."—Vinegar and alum in the ear may be very efficient for such a purpose. It is much better however to keep the cow doctor's ideas asleep than to "wake up" those of the cow.

"Horn ail," so called, is, according to the authority above mentioned, only a "symptom of derangement." "It is no more" he says, "a disease of the horns, than it is of the functions generally; for if there be an excess or deficiency of vital action, within or around the base of the horn, there must be a corresponding deficiency or excess, as the case may be, in some other region." The horns will feel cold whenever there is an unnatural distribution of the blood, which may arise from catarrh, exposure to cold, or allowing the animal to wallow in filth, and when there is derangement of the digestive organs. The treatment should be for the derangement, whatever it may be, and not a treatment of the horns by boring or otherwise.

We think the practice of doctoring sick animals is greatly overdone. It is much safer to trust the sick beast's natural constitution than the ignorant quack's physic. We saw once a noble ox choked to death, we do not doubt, by a friendly but mistaken attempt to relieve him of an apple in his throat. Another in just as bad a case, relieved himself without help. Nine times out of ten, the cattle doctoring we have is mere quackery. If intelligent farmers would study the subject of cattle diseases, they would soon learn enough at any rate to have them let alone. The best treatment is that which gives nature free play. Help if you can, but don't obstruct her action.

## PERUVIAN GUANO TRADE.

It will seen by the following decree, that a material change is about taking place in Peru, in the management of the Guano trade, and that our peculiar friends, the Messrs. Barrera & Co., whose impolitic conduct, as the Agents of the trade in this country, has made themselves and their government stink in the very nostrils of the consumers of the staff of their support, are to be replaced, we hope by other men who will act more in accordance with the commercial usages recognized among civilized nations; for verily, could an article be found that consumers could have entire confidence in, that would in all respects take the place of their Guano, the universal feeling which is abroad against the Agency in this country, would prevent the sale of a single ton of it.

The Baltimore American, in publishing the decree remarks:

"Vivanco's party, [the revolutionists,] although but of recent formation, is exceedingly popular, and it is believed he will attain a secure position. He is already in possession of the national war steamers, with the command of the sea, and in actual occupation of the Chincha Islands.

"In case Vivanco's government should be overturned, which is thought highly improbable, vessels proceeding from this country to the Chinchas under the above authority, would have ample time to arrive and load, before the antagonist party would be in a condition to interfere.

"Vessels going out under this invitation should keep secret their destination, and the Captain should be directed to call upon the Commissioner stationed at the Chinchas, or the Commander of of the war steamer Apurimac. They should take with them the necessary funds in gold ounces, silver dollars, or American gold, by which they can obtain more favorable terms. They should also bring a sufficient number of empty gunny bags to fill with guano to form a floor, and provisions enough for the homeward voyage, that they may start directly from the Islands."

The late Government, or some branch of it, had before declared that the contract under which the business was now conducted, was void, having been forced upon it by a refusal to honor the drafts of the Government, drawn on the sales made, unless their contract was renewed, thus forcing the Government to continue its connexion with them, evidently against its will and interest.

The Panama Star and Herald says: "We have received such information by the steamer from Callao as justifies us in stating, with tolerable certainty, that arrangements are at present being made for transporting the Peruvian Guano across the Isthmus of Panama. We hope to be able to give more full information on the subject soon."

[TRANSLATION.]

Manuel Ignacio de Vivanco, Supreme Chief of Peru, and Brigadier-General of its Armies, &c., &c., &c.: Considering—

That every government has the right to compel its subjects to acknowledge its authority;

That the house of Barrera & Brother has not only not acknowledged the authority of this government, being, as it is, its consignee, as the possessor of the Guano deposits; but has even committed the disrespect of not answering the official communications that have been addressed to it through the Ministry General;

That the Government cannot and should not tolerate that Peruvian subjects should maintain a hostile position towards it, supplying at the same time resources to the enemy—I therefore decree [as follows:]

Art. I. *The free exportation of Guano to the United States of America is declared.*

Art. II. From to-day, and for the term of thirty days, propositions will be admitted for the exportation of Guano from the Chincha Islands to any part of the globe, excepting the United Kingdom of Great Britain and Ireland, and the French Empire.

Art. III. Propositions may be directed to this Ministry General, or to the Commandant General of the naval forces, on board the war frigate Apurimac, or to the Commissioners whom the government may nominate for this especial object.

The Minister General is charged with the fulfilment of this decree, and to have it published and circulated.

Given in Trujillo, the 7th February, 1857.

M. I. VIVANCO.

By order of his Excellency,

MANUEL DE LA GUARDA.

P. S.—A subsequent arrival brings intelligence from Callao, that vessels were loading guano at the Chincha Islands, under permits in accordance with the above decree, at \$18 to \$25 per ton, and even for a less sum, and we hope to have the pleasure of announcing their arrival in time for Fall use, when the question will be tested, as to the high price of freights causing the exorbitant price of guano—competition, if continued, will soon demonstrate that the guano can be brought and sold in this country for less than \$50 a ton.—Let those interested govern their purchasers accordingly.

Although receiving daily very flattering testimonials of the approbation of our readers, there have been few more gratifying to us than the annexed, evincing, as it does, a disposition to improvement, from a source in which it has been supposed there was the least disposition to break through old established prejudices.

If we remember aright, the paper was originally ordered by the owner of the farm, and was continued for three years thereafter, the back dues being now received from our correspondent:

LOUISA COUNTY, VA., Feb. 20th, 1857.

Friend Sands:—Dear Sir—I call you friend, because you have been my friend in sending me your valuable paper; but I am sorry that you have been kept out of your just dues so long. I was not aware of my indebtedness to you, until you sent me my account; as some friend sent me the paper, and one that I judged was able to do so—but to make some amends to you, and for the benefit of my friends, I send on the money for two new subscribers, with the amount I am due you. I could not get on now without the light of the American Farmer; so let us have the paper. My crops have more than doubled in quantity, and also in quality, since I have been reading the Farmer. Our stock also has more than doubled in value, and the main-spring of it all, you must know, is the great improvement of the land by your advice: deeper ploughing and manure making, and the close attention to the culture of clover.

With the best wishes for the American Farmer,  
— — —, Oursseer.

# PROCEEDINGS OF THE EXECUTIVE COMMITTEE OF THE MD. STATE AG. SOCIETY.

MARCH 3d, 1857.

The Executive Committee met pursuant to the requirements of the constitution. Present—R. M'Henry, Esq., President, and Messrs. S. P. Smith, Frank Cooke, Oden Bowie, Geo. R. Dennis, Charles Ridgely, of H., and James Howard M'Henry.

The proceedings of the last meeting were read and approved.

Mr. M'Henry, from the Committee on the room, appointed at the last meeting, reported that they had taken the room in which the Committee was now holding its session, in place of the upper room in the same building. The report was accepted.

Mr. R. M'Henry, from the Committee on the Show Grounds, reported that they were now in charge of a person heretofore appointed for the purpose, and that measures were in progress for their more advantageous disposal.

The Treasurer presented a report of the amount of moneys subscribed by officers and members of the Society, for the purpose of liquidating the debts against the Society, the amount of which was fully sufficient to meet all demands.

Mr. O. Bowie, moved that the Annual Exhibition of the Society be held on the 4 days commencing Tuesday, 20th October, being the week preceding that of the Va. State Agricultural Society's Show, which was concurred in.

Dr. Smith, moved that a committee of three be appointed, of which the President shall be Chairman, whose duty it shall be to obtain voluntary subscriptions, or guarantee to the Society against loss, from the city and citizens of Baltimore, with a view to render the next exhibition more attractive and worthy of its object, than former ones have been—which was concurred in. Committee, Messrs. R. M'Henry, Frank Cooke and Jno. Brune.

Mr. O. Bowie, moved that the President and Marshal be authorized to rent the refreshment booths on the Show Ground at the next exhibition, and to make the arrangements necessary for the show. Mr. J. H. M'Henry, moved that liquors be excluded from the ground, which was dissented from—and the resolution was adopted.

Mr. O. Bowie, moved that a committee of three be appointed, of which the President shall be the Chairman, to correspond with our government, to bring anew before it the subject of the guano trade with Peru; which was concurred in. Committee—Messrs. R. M'Henry, O. Bowie and Dr. S. P. Smith.

On motion of Dr. Smith, Messrs. M. T. Goldsborough, J. T. Earle and Geo. W. Hughes, were appointed a committee (the President being authorized to fill vacancies, &c.) to make arrangements for a trial of Reapers and Mowers, at the next harvest, of which due notice will be given, with time and place, and other particulars.

On motion of Mr. G. R. Dennis, the Committee of Judges was ordered to consist of nine, to be appointed by the President.

On motion of Dr. Smith, the President was requested to forward circulars to the Vice Presidents, and others, requesting them to aid in the selection of judges at the next exhibition.

The Committee then adjourned.

Test,

SAML. SANDS, Gen. Sec.

# IMPORTED STOCK OF R. H. DULANEY, ESQ. OF LOUDON CO. VA.

A correspondent of the *Southern Planter*, speaks in high praise of the several lots of stock imported by Mr. Dulaney of Loudon Co.

"The first on the list, in point of value, a *Cleveland bay stallion*, called "Seivington," a truly magnificent animal. He is a deep bay, five years old, stands sixteen and a half hands high, is big enough for the plough, but with sufficient action for the saddle, and is so symmetrical in his form that he looks but little above the average sized horse. He received the first premium for "Coaching Stallions" at the late meeting of the Royal Agricultural Society of England, and is spoken of by the *Mark Lane Express*, as "leaving nothing to desire in this class of horse," a condensation of praise which leaves nothing further to be said on the subject."

Of four *Short-horns*, two calves, and two two year old heifers, the latter are said to be the most perfectly beautiful heifers the writer had ever seen. They were bought for Mr. Dulaney by Jonas Webb, at a high price.

The sheep consist of "a ram and twenty-three ewes, all yearlings of the pure South Down breed; and such a lot of sheep I am sure, have never been seen in the United States. The ram is certainly the *ne plus ultra* of sheep; he is as big as a Cotswold, and is a model of symmetry and beauty. Six of the ewes received the first premium at the recent meeting of the Royal Agricultural Society of England, and are almost as perfect as the ram."

The writer describes the lot of *Berkshire hogs* to be "as pretty as hogs can be."

Besides these, Mr. Dulaney has a number and variety of stock of other importations. While he gratifies his own taste for fine stock, Mr. D. entertains the purpose of disseminating the best breeds by selling the progeny of these importations at a price much below the usual cost of animals of the same value.

# CORN AND COB MEAL.

BELMONT, PA., FEB. 16th, 1857.

*Messrs. Editors:*—In your Oct. No. under the head of Farm Work, you advise, when selling corn, to retain the cobs and grind them for cattle food, as they contain two-fifths of the strength of corn. This, in the day of Little Giants, Magic and other crushers is a fact worth being established, as very many believe the cobs not only worthless but injurious to stock when crushed with corn and fed in a wet or dry state; others say 4½ per cent is the strength of the cobs, and then it purges more than it benefits the animal. I should be glad of more light on this subject. Yours, F.

# ANSWER.

In speaking of the use of either crushed or chopt feed, we have always recommended that it should be mixed with cut hay or straw, and moistened with water. Such food should never be given dry. In the feeding of roots too, they should, after being sliced or cut up be mixed with cut hay or straw.

That the cob possesses considerable nutritive



matter was demonstrated by the experiment of the late P. Minor of Virginia. "He took 10 bushels of corn and cob, weighing 347 lbs., and 10 bushels of shelled corn, and subjected them to the process of distillation. The product of the corn and cob was 13 gallons of spirits, and of the pure corn 18 gallons." No better proof of the nutritive properties of the cob, need be asked.

Mr. Robert White, of Shrewsbury, N. J. fed with corn and cob, with decided advantage.

The late Judge Buel, says in the Cultivator, that cob and corn meal is improved by scalding.

We have known corn-cobs, before the days of the Little Giant and others of that class, to be simply broken with a hatchet or axe, boiled, and in that state steamed with corn-stalks cut small, and fed to cows through an entire winter much to the advantage of the animals.

If the "strength of the cobs" is as our correspondent says  $4\frac{1}{2}$  per cent. and that nutrient, we should say that they were very rich.

#### CULTIVATION OF IRISH POTATOES.

Mr. Joel Blew, of Savage, Md., left at our office some of his Seedling Potatoes, which are very fine indeed. He has been experimenting many years with the potatoe, and thinks he has attained to the *ae plus ultra* in their culture. He has also furnished us with the following communication in reply to enquiries made to him upon the subject, and which he published some time since in *The Sun*:

Ques. 1.—What time is best to plant?

Ans.—From the first of April to the first of July.

Ques. 2.—What sized potatoes do you prefer to plant?

Ans.—In May I planted four rows with very small potatoes, 86 to the pound., one lb. planting 19 yards—344 yards in all. I planted the next rows the same day, and in all respects alike, with the very best seed I could pick out. I culled over 30 bushels to fill a flour barrel, 5 potatoes to the lb; cut them 40 pieces to the lb. October 1st, dug 70 yards of the small seed planting—the product was 50 lbs., counted 450, 9 to the lb; 12 of them were diseased; weight of the diseased was 2 $\frac{1}{2}$  lbs.; rows 2 feet apart, 94 bushels per acre. October 23, dug 70 yards from the good seed; product was 116 lbs.; counted 513 of all sizes;  $4\frac{1}{2}$  to the lb.; 3 of them were diseased; weight 14 oz.; rows 2 feet apart; 220 $\frac{1}{2}$  bushels per acre. October 24, dug 70 yards from seed 2 to the lb.; cut 35 pieces to the lb.; weight 104 lbs.; 16 of them were diseased, weight 4 lbs.; rows 2 feet apart; yield 195 bushels per acre. Next dug 70 yards of the seed 20 to the lb., cut 40 pieces to the lb.; yield 144 bushels to the acre; 5 per cent diseased. I think 5 to the lb. is best.

Ques. 3.—What kind of manure produces the most farinaceous potatoes?

Ans.—Light rich "new ground" gives the largest per centage of starch meal, often as high as 14 $\frac{1}{2}$  per cent. In "old ground," if manured with cow manure, or with hog manure, or with goat manure, or with carbonate of potash, or with nitrate of lime, about 10 per cent of starch meal. If

manured with night soil, or with nitrate of potash, or with horse manure, 11 per cent starch meal. If manured with guano, or with sulphate of ammonia, or nitrate of ammonia, it gives about 12 per cent of starch meal. If manured with plaster, and the season is very wet, not more than 8 per cent of starch meal. If the season is very dry and hot, 10 to 12 per cent of starch meal. I think that plaster nearly always injures the quality of the potatoe, and never increases the yield.

Ques. 4.—What kind of manure produces the largest yield?

Ans.—Assuming that the land without any manure would yield 40 bushels, or 2,000 lbs., per acre; then 100 lbs. cow manure will add 22 lbs., 100 lbs. horse manure will add 12 lbs., 100 lbs. hog manure will add 10 lbs., 100 lbs. night soil will add 15 lbs., 100 lbs. Peruvian Guano will add 1,250 lbs., 100 lbs. carbonate of potash will add 2,400 lbs., 100 lbs. nitrate of lime will add 1,200 lbs., 100 lbs. dry hog hair will add 2,200 lbs., 100 lbs. dry clover hay will add 250 lbs., 100 lbs. finely ground bone will add 300 lbs., 100 lbs. waste wool will add 700 lbs., 100 lbs. dry hen manure will add 650 lbs., 100 lbs. dry pigeon manure will add 900 lbs.

We may then suppose that 13 tons of cow manure on an acre will increase the yield 114 bushels; 20 tons horse manure 96 bushels; 20 tons hog manure will add 80 bushels; 400 lbs. guano will add 100 bushels; and that 100 lbs. carbonate of potash will add 96 bushels. So go on, reckoning 50 lbs. to the bushel.

#### THE POTATO ROT AND MANURES.

F. Fay, in the *Country Gentleman*, speaking of the use of ashes, says, "We have tried them on potatoes, when they increased the yield and evidently the Rot." This was our experience the past year in the use of both Peruvian and Colombian Guano. Those manured were more or less rotted, while intervening rows without manure were sound. The increase by the manure much more than paid the cost notwithstanding the rot. A very rich turf however, without a direct application of manure, is the safest preparation for a crop.

#### INCREASE OF THE COTTON CROP IN THE UNITED STATES.

During the year 1784 an American vessel having eight bales of cotton on board, was seized at Liverpool, on the plea that so large an amount of cotton could not have been produced in the United States. In the year ending 30th of June, 1856 (72 years from the shipment of the eight bales,) there were exported from the United States 1,351,431,701 pounds of cotton, which at 400 lbs. to the bale, makes 3,378,579 bales, worth \$128,382,351.

#### AGRICULTURAL INSTRUCTION.

"I cannot sufficiently wonder," says an old writer, "that they who build, call carpenters and architects; they who trust ships to the sea employ men skilled in navigation; they who make war, men taught in arms; and that farming alone, the nearest to and as it were, kindred of Philosophy, wants both pupils and teachers. Neither professors or disciples of agriculture have I ever known. And yet without agriculturists, mortals can neither subsist or be nourished."

## U. S. AGRICULTURAL SOCIETY.

*Grand National Trial of MACHINERY and IMPLEMENTS of every description pertaining to AGRICULTURE, and Household Manufacturers, at the*

### FIFTH ANNUAL FAIR,

*To be held at Louisville, Ky., during the fall of 1857.*

The undersigned, a Committee of the United States Agricultural Society, appointed at the Fifth Annual Meeting held at the Smithsonian Institution, in the city of Washington, on the 14th day of January, 1857, "to make all the necessary arrangements for a *National Trial in the field of Agricultural Implements and Machinery*," respectfully invite the Inventors and Manufacturers of all such articles, both in the United States and Foreign Countries, to participate in a public trial to be made at the Society's Annual Exhibition, to be held at Louisville, Kentucky, during the fall of 1857.

This new arrangement for the exhibition of Agricultural Implements and Machinery of all kinds in actual operation, results from a conviction on the part of the Society that no just awards can be made except upon a practical working trial before competent judges; and the fullest opportunity will be afforded to test the comparative merits of the various machines that may be entered as competitors for the awards, both as regards land for field implements, and steam power for stationary machinery.

A SEPARATE TRIAL OF REAPERS AND MOWERS, will be made at the appropriate season, special arrangements for which as to time, place, &c., will be announced at an early date.

It is intended that these exhibitions shall be on the most extensive scale for the purpose of testing the working qualities of these important implements more thoroughly than has yet been done on any previous occasion either in the United States or in Europe.

All articles from foreign countries intended for exhibition may be consigned to the "Agent of U. S. Agricultural Society, Louisville, Ky.," by whom they will be received and stored free of charge.

This brief announcement of the proposed Trial is made at this early date to afford the most ample time for the preparation and transmission of machinery. A circular containing full particulars as to regulations will be issued as soon as practicable, and, with the Premium list will be forwarded to persons who may apply to the Secretary of the Committee, Henry S. Olcott, *American Institute*, N. Y., where all business letters should be addressed.

To enable the Society to make arrangements on a sufficiently liberal scale, it is absolutely necessary that the Committee should know what articles will be offered for competition; and they therefore request that all inventors or manufacturers who may be disposed to unite in the proposed Trial will communicate their intentions to the Secretary at their earliest convenience.

TENCH TILGHMAN, Chairman, Oxford, Md.

JNO. D. LANG, Vassalboro, Me.

J. THOMPSON WARDER, Springfield, O.

GEO. E. WARING, Jun., Am. Institute, N. Y.

HENRY S. OLCOTT, Sec., Westchester Farm School, N. Y.

*Committee on Implements and Machinery of U. S. Agricultural Society.*

Editors of Journals of every description, who are desirous to promote the interests of Agriculture and Mechanics, will confer a particular favor by an insertion of the above circular.

## CHINESE SUGAR CANE.

*To the Editors of the American Farmer:*

GENTLEMEN—Your correspondent "Doddridge," towards the close of his very pleasant article in your March number, after alluding to the discrepancy between the estimate of the Patent Office Report, and that of Mr. Orme, of Georgia, as to the yield per acre of the green crop of Sorgho Sucre, or Chinese Sugar Cane, asks "how do these figures stand the test of Messrs. Harris and Slicer's experiment?"

Although I cannot answer satisfactorily the question of your correspondent, perhaps I may be able by detailing my own limited experience in the cultivation of this plant, to throw some light upon the subject, and enable him as well as others who feel an interest in the matter, to arrive at conclusions approximating very nearly to the truth.

My experiments were made in good garden soil, with two small parcels of seed received from the Patent office last spring. In conformity with the directions upon the packages, one portion was cultivated in drills as Broom Corn is usually cultivated, and the other as Indian Corn in hills, two feet by three feet apart, ten seeds to the hill. The seed nearly all germinated and came up finely, but the plants at first had a very unprepossessing and delicate look, not unlike the common crop grass. In the course of two or three weeks, however, they put on a very different appearance, grew rapidly and strongly, assuming a deep green color, and nodding as heavily as a first class crop of Indian Corn.

That portion cultivated in drills was decidedly more slender and delicate in stalk and fodder, than that cultivated in hills, and was deficient in the quantity of seed; and a storm of wind that passed over my grounds about the time that the seed heads were maturing, prostrated every stalk of the former, while the latter remained uninjured; although growing immediately adjoining it. Upon an examination at the close of the season, I found that the stalks of the drilled plants were not so hard and woody as the others, in their exterior, and I thought somewhat deficient in saccharine matter. They grew to an average height of about nine feet, and about three-fourths of an inch in diameter, and produced generally but one seed head.

That portion cultivated in hills was thinned out to four stalks to the hill, and attained an average height of over ten feet, and a diameter of over an inch. The seed heads upon the tops of these plants were very heavy, and about the time that they began to assume a dark hue, I observed a general disposition to throw out lateral shoots from the upper blade joints. As I knew nothing of the habits of the plant I determined to leave them undisturbed, and await the result. These proved to be other seed heads, all of which matured perfectly before the close of the season, increasing the yield of seed fully one hundred per cent.

I have before me now the seed produced by an average single stalk of this description, which I stripped this morning in order to test the quantity. The yield is not quite half a pint, but considerably over a gill and a half. This would give for each hill of four stalks one and a half pints of seed, weighing as mine do by actual test to-day, forty pounds to the bushel. This yield appears to be large, and it is perhaps greater than what the result would be generally, but I am inclined to think not much above what will be realized when the soil is good, and it is thoroughly cultivated. At all events it furnishes data from which an approximate

estimate may be made by any of your readers, of the quantity of seed that may be grown upon an acre.

My impression is, that the amount of Fodder per acre, if cut but once during the season, would be fully equal to that from Indian Corn cultivated in the same manner, and if it will, as is alleged, bear cutting a second time, it would of course be doubled. Those who know what the yield of Fodder from Indian Corn is, will be able to decide as to the reliability of the statements referred to by Doddridge. I confess that I am too much of a novice in such matters to know, and cannot therefore give an opinion as to the quantity.

I feel satisfied that it is a very valuable plant for feeding purposes alone, and expect to cultivate it this season broadcast, to be cut and fed green to my stock, and also in drills and in hills like Indian Corn, for fodder and for seed, and possibly to make some experiments with the juice.

All agree I believe, as to its ability to endure great drought without material injury. With me it exhibited another quality of great importance, that of withstanding very severe frost without injury. You will perhaps recollect, Messrs. Editors, that I furnished you with some specimens, on the morning of the second day of the late Exhibition of the Maryland State Agricultural Society. They were cut promiscuously from my grounds on that morning, and were as green in leaf and stalk as they were in July or August, although every hill of Indian Corn in my neighborhood had been killed by frost several weeks before.

Yours truly,

E. A. SLICER.

OATLAND, BALTIMORE Co., March 21, 1857.

#### AN AGRICULTURAL STATE UNIVERSITY.

##### LETTER I.

We have observed in a recent issue of one of our city papers that a committee, consisting of five members, have been appointed by the National Agricultural Society to present to the consideration of Congress, the practicability and necessity of establishing in each State an Agricultural University. Of the character of the gentlemen who constitute the association, which has delegated these gentlemen to solicit Congress, as well as of the gentlemen who have been delegated, any comment would be superfluous. They are known over the wide extent of the land. The advantages of the proposed measure, it will be observed, unlike many, will be confined to no locality, but will extend to all of the States.

As a Marylander, and one, too, who knows something of the claims of Agricultural interests upon the favorable consideration of Congress—who knows, moreover, by experience, something of farming, a few years of my early life having been spent in that pursuit—I feel it to be a privilege, through your press, to lend my aid in advancing interests so fraught with consequence to our national prosperity.

It was remarked by no less a man than General Jackson, that the "products of the soil and our minerals were among the most productive sources of wealth to our nation." That this is true cannot be questioned. The experience of the nation most abundantly confirms a theory upon the recognition of which depends, in no small degree, our wealth and prosperity as a nation.

Among the means of securing thrift and enterprise to our commercial and mechanical interests, does the culture of land stand prominent? If this be apparent,

its tendency, and that, too, its proximate tendency can be none the less so, to wit: the augmenting our national resources. There is no merchant who intelligibly pursues his vocation but knows that the value of the commodity with which he traffics depends upon the abundance or scarcity of those products which form the bases of wealth. Of what value is money unless a corresponding and substantial equivalent be found?

There is no mechanic who pursues his trade understandingly who can do otherwise than admit that its activity depends upon something behind the immediate demands for more houses, dwellings and steam engines, &c.

Of what value is your Baltimore and Ohio Railroad if there be no grain or stock to be conveyed over it? Were the soil of the West undeveloped, need there be any occasion for travelling?

If the first proposition be true, which we are presumptuous enough to believe none will controvert, the sequel of the same can be none the less so, to wit:—the necessity of encouraging those men and those interests which develop the staple products of soil that constitutes one of the bases of our wealth. How shall these interests be encouraged?

The answer, so far as it extends is categorical. Establish State Universities, wherein shall be taught to Farmers some of the great and fundamental principles which must be known and observed in the culture of land, and which, because neglected, after a series of years, must at last be stumbled over and tested. This is a day of progress, when the profession and vocations of men must be made specialties. If a man is to become a lawyer he must be prepared as such. If a surgeon (which though under a category with that of a physician,) is nevertheless such a department of that profession as needs special attention in order to eminence, in addition to a scientific knowledge of the human system, his hand must be skilled in all of the uses of the instruments. If a merchant, he must pass through an ordeal in the counting house. If a banker, he must become an adept at the counter. If a farmer, does he need no preparation?

If such a University be established what will be the advantages accruing from the same?

It will afford facilities for the instruction of men in the science and practice of farming. It will secure for each State a reservoir of intelligence. It will elevate a vocation which by some, because not understood, has been looked upon as a subterfuge for the indolent, or as a successful mode of securing a living to the industrious.

Suppose only a few can directly reap the advantages of such an institution? Will not these farmers thereby educated exert an influence over those by whom surrounded, and thereby secure one of the many advantages anticipated by the creation of such an institution?

But, says some practical farmer, when we come to place this land under cultivation, this "book farming" will not suit. When we come to plough up these old lands in our own State, where scarcely a spear of grass can be found, or where if sedge, the symbol of poverty is visible, it serves only for a shelter to rabbits.

I denounce as much as any one this book-farming if carried to an extreme. Being ignorant of the science, did you ever, after the introduction of guano into our State, misapply this manure? How long was it ere the true process in its application



was fallen upon? Instead of applying it upon the unproductive soil, in virtue of which an ingredient was placed into the soil necessary to vegetation, we find would-be *economists*, making the application of this great fertilizer upon the land to which had already been applied lime.

Though after this, in some measure efficient, the fact of its greatest efficiency upon unimproved and untilled soil was at last as an accident stumbled upon. This is one illustration of the advantages accruing from a University established for the purposes *above* specified. By means of this, farmers, if not *stubborn* in their adherence to their old and stereotyped processes of farming, will have an institution whence will emanate information necessary to be known to an efficient and successful culture of their lands.

The advantages accruing to commercial, mechanical, or professional interests indirectly, I shall not specify. In my next, I shall attempt to show that Congress, in view of her immense revenue arising from the sales of public lands, has the ability to establish these Universities. The practicality of the measure and in view of the universality of the claim, it cannot be easily rejected by that body.

In conclusion, allow me to say, that the farmer has interests which must be conceded to him, and we too, my fellow-countrymen, have interests involved in his success. FRIEND OF EDUCATION.

#### LETTER SECOND.

In my first communication, which has already reached the public, I attempted to show, so far as was possible in so small a space allotted to a newspaper article, the important relation sustained by Agriculturists to other departments of the body *politice*, be it mechanical or commercial; I moreover intimated that in proportion as the resources of our soil are developed, just in such proportion do we find other interests enhanced, *business* brisk, and *money* abundant. In the same, I alleged that one of the conditions of a thoroughly and properly developed soil was based upon the idea of the land being intelligently tilled—that farmers were not to stumble upon principles necessary to be known and observed in the culture of lands, but must learn and apply them. How are they to do this? Can any more happy expedient be fixed upon than the one proposed by the National Agricultural Society, to wit: the establishing in each State of an agricultural college? It is now my intention to show that Congress has the ability, in view of the immense revenue accruing from the sale of public lands, to make the appropriation asked for: that the measure is entirely practicable, interfering with no principle which should regulate their action, and that in view of the universality of the claim, cannot be easily rejected. To any one conversant with the financial condition of our general government, argument would be unnecessary to prove the ability of Congress to do what has been proposed to be asked of that body. The allegation is all that is necessary. The immense amount of funds now in the treasury, and our almost fabulous accessions annually, are glaring facts. She is *able*—the nation's coffers are full. Is such a scheme practicable? In other words, will such a step conflict with the previous policy of the government, or of administrations?

Does not this touch some of the *favorite* theories of your party distinctions? Has not this question

of internal improvement been one about which political parties formerly differed? To all of these, and a host of other questions, which are incidental to what we have here affirmed, we cannot now furnish answers. The appropriation proposed to be asked for by the *national* society is for all of the States. It is not for Virginia or for New Jersey—not for Maryland or for Delaware, but for each and every one. It comprises the whole of the States: it is, then, a universal measure. There is one feature in this whole matter which we should not lose sight of, to wit, the claims of the old States for their quota of the benefits ensuing upon the sale of government lands. It is now one of the principles of our general government, and a commendable one too, that so soon as a new territory has become settled to such an extent as to warrant said territory to apply for admission as a State, to admit the same, and to make such an appropriation of public lands to said newly-admitted State as, when judiciously disposed of, or improved, promise princely endowments for the objects appropriated. Do you wish an illustration? Look at the school funds of the new States. This is all proper. It is an evidence of our nation's appreciation of this glorious institution.

The next expedient is the appropriation of each alternate section of the public domain towards the encouraging the building of mammoth railroads. To this we make no objection. The latter opens avenues over which the products of the interior find their way to market; these contribute largely to the settling and developing our new and wide extended territory. The former furnishes the new commonwealths with the means whereby they are enabled to prepare their youthful citizens for becoming useful and intelligent men. But how is this? Are those *old parent* States upon the Atlantic coast, which fought for and achieved our country's independence, in virtue of which all of this vast extended territory becomes the common property of us all—how in this, I ask, are they receiving, directly or indirectly, benefits equivalent to those which are secured to the emigrant to the new State? How are we, as one of the old Colonies and States, receiving similar benefits from our common patrimony? 'Tis true, we may have a school fund, such as received its first impulse from a tax upon imported liquors; from the appropriation or purchase of a few hundred acres of land in the old counties of the State in its early history; perhaps a school fund from a tax imposed upon Banks, or from the appointment of the surplus revenue from the general Government in '26. But in any one of these Atlantic States, what is it? Have we any railroads built from public lands to develop those portions of our States remote from markets, except what private individuals or corporations built? Are not our farmers emigrating from the East to the West? Is not our land, in the same ratio of the emigration, depreciating? We want some of the proceeds of the sales of our common territory, and we are entitled to it. We want the farmers of our own States to know that these lands of ours can be made to produce crops far beyond what their most sanguine expectations would have supposed. Such is their seclusion they would have never dreamed that on this side of the mountains, there are lands which can be made to produce as abundantly as those in the remote West. These are in proximity with the great commercial

emporiums of our great nation and with the sea. Shall they be vacated by their occupants or their children, who go to seek a more luxuriant soil far removed from their homes and old associations? Is this not the tendency of the times? Is it not palpably so of the farming part of our community? Here our lands, many of them though unproductive, because worked down by the process of farming in vogue with the old farmers, in juxtaposition to market and the sea, and near the old domestic fire-sides of so many of us, are poor, but can be made, by a proper and judicious application of lime, guano, &c., to produce crops more luxuriant than when the land possessed its pristine verdure. These "old fields" can be, and are now being renovated and made to "blossom as the rose." In the remote West lands are cheap and productive, though far removed. Need our lands be unproductive when nature and man have laid their contributions at the disposal of the intelligent farmer? To accomplish this, I then conceive that one of the most eligible means is an appropriation by Congress to each of our States of five hundred thousand dollars, with which an Agricultural School could be established in each State.

FRIEND OF EDUCATION.

[From the Southern Farmer and Planter.

#### CIRCULAR SAWS.

Mr. Editor:—The brief essay I now have to offer you, in conformity with a promise long since made, has remained in embryo for several months; but as the public could derive no benefit from a knowledge of the cause, time need not be wasted with unnecessary apology for its delay.

In discussing the subject under review, I bring to my aid, fifteen years experience in cutting lumber, and a general knowledge of the various kinds of mills, as well as many of the wheels now in use, without the slightest personal interest in doing other than justice to their respective merits, so far as I may attempt to treat of them.

If quantity or quality of lumber to be produced be a desideratum, then a fifty-two inch circular saw, or one about that size, is the very thing, surpassing any other, to accomplish the object. If properly put up and rightly managed, it will cut more than two vertical or crank saws, worked after the most approved manner; it matters not whether they be propelled by the modern reaction, or the old fashioned flutter-wheels, under high heads of water, and driven to their utmost capacity. It is better adapted than any other for cutting all kinds of ordinary sized timber—except, perhaps, ranging timber, in which case a gang of vertical saws, to make a clear finish of the stick at a single through, may be preferable. But this is a question not yet settled fully to my satisfaction. It is true, a circular saw does not cut seasoned timber with the same facility that it does green; but I have not yet found anything in the shape, or of the texture of timber, that it will not cut with apparent ease. Oak and hickory yield to it nearly as readily as the harder kind of yellow pine; and the knots in the upper cuts of the latter never retard its progress, or cause it to diverge from a true line, like they do the vertical saw. The upper cuts universally work up easier than the lower ones. The circular runs with such velocity that it has not the time or the inclination to fly the track, for a knot, like the vertical saw, which too often adopts the false rule of making

"the furthest way round, the nearest way through."

I have recommended a fifty-two inch saw as a maximum size to begin with, but a smaller one will do. The one I am now running was originally fifty-two inches, but has worn down to about forty six; and yet we encounter very little difficulty in reducing the largest trees into any kind of building material—either scantlings, boards or laths, of any required dimension. If it does not cut through the first time, a little help with an axe will bring off the first slab; then the log must be turned, the face down, and in like manner a slab and plank may be taken off of the next side; this being done, turn down the last made face, as before, and continue the process of taking off, until the timber is so reduced that the saw will cut entirely through it. After the log is worked up, the rough-edge plank may be put on the head blocks and converted into square-edged boards, as wide as their faces will allow, or they may be run into laths. To one unacquainted with the process just mentioned, much difficulty may be found, but it will not be verified in practice. There need be very little waste of timber, as the saw is capable of reducing nearly all of it into some useful materials.

Common sized timber is managed differently. The best plan is, to take the first slab off of the side bowing outwards, and the next opposite to it. Then turn down and saw into the required thickness. If the bottom face should not be large enough to keep on the head blocks until the log is worked up, as is often the case, when necessary, turn it over to finish the last line or lines, as the case may require.

One of these large circulars will not only do double the work of a vertical or crank saw, but do it better, and with a less expenditure of water—if water be used, and rightly applied, as the propelling power. The same may be said of steam, or any other motive. This assertion is sustained by theory and verified by practice.

The circular has an onward motion, nothing retarding it but the resistance of the wood it has to sever. The teeth are so shaped as to cut and not tear their way, like those of a vertical saw. The latter, being worked by a crank, has to reverse its motion—comes under the law of action and reaction, every stroke it makes; its teeth must break instead of cut the wood they have to remove.—The sash, the carriage, the crank, bound down as it must be, all encounter much friction; while every part of a circular mill can be put in motion by the strength of a man. Hence, in the one there is little, while in the other there is great friction, and consequently loss of power. These are some of the reasons to be advanced, illustrative of the superiority of the one over the other. More might be advanced on the subject, but as it is not my purpose to theorize, I will proceed to give facts.

In 1852, I substituted a circular for a vertical saw. Since then, we have doubled our previous operations. The crank saw required steady driving, throughout the day, and often part of the night, to make an average of 2000 feet of square-edged boards; but now, the circular, moderately worked produces 4000 feet, of a superior article. It is capable of turning out much more, but I have used such figures as we endeavor to work up to. They may look large to a man that knows nothing of the powers of such a mill; but to some others, well acquainted with the operations of circular

saws, I am sure they will look small. Be it so; yet, many will be ready to acquiesce in the opinion that it is pretty fair work—especially in hard pine. I have never made the attempt to see how much we could cut in a day. But many a log, 20 feet long, squared to 12 or 14 inches, have I seen run into plank, at the rate of less than a minute per line, including running back and setting.

Two men and two small boys are required to attend to it. They draw in the logs, saw and put the lumber out of the mill. Another does the stacking away, (so as to be made up afterwards into rafts, and sent down the Edesto, to the Charleston market.) The operatives are all negroes—trained by myself. With the aid of a little supervisory direction, from me, they keep the mill in good condition; and since we have been running the present one, I have had less trouble to keep all right, than I formerly had to keep the other in working order. Hence, the change has been to me not only advantageous pecuniarily considered, but it has also relieved me of a great draft upon my time, by requiring less of my attention.

The power I use is water, applied to a breast wheel, 12 feet in diameter, and 10 feet long; the maximum head, including fall, is about 12 feet; the head above the aperture is 350 square inches; it is divided in the middle so as to allow of two gates; the wheel is also divided by a middle rim, giving greater strength to it, and each side receives the water from its corresponding gate or shute. The water is let on the wheel by two hand levers, easily worked. The man that controls them, also manages the levers giving direction to the carriage. He opens one gate, letting half the water on the wheel, by the application of his hand to the lever; the saw starts, then, with his foot, he presses down another lever, whereby the carriage is put in motion, and it brings the timber in contact with the saw; the other gate is then opened, in like manner as the first, giving the saw its maximum power; the timber is speedily severed, and then, as the saw clears itself of the labor, the first gate is closed; the motion of the carriage is reversed, by the application of the foot and the hand of the man to the two levers under their respective control; in this way, the carriage is run back, the other gate being closed in the mean time, and all done by the same man. Thus the whole of the water is shut off, during the five or six seconds required to run back and arrange the timber for the next line. This process is repeated, for each line cut, consequently there is no unnecessary waste of water, or unnecessary wear and tear of machinery; the saw, though continuing to run, does so from its previously acquired momentum. It is geared to make about 900 revolutions per minute, under full speed, out of timber.

On one side of the water wheel, to a strong wooden rim, seven inches thick, are firmly secured ten cast iron segments, constituting a driving wheel, with 140 cogs. This works into a cast iron bevel pinion, with 34 cogs; it being fastened on a wooden shaft, working vertically, and extending to the upper story of the house. On the upper end of the shaft is a cast iron bevel cog wheel, with 70 cogs, driving a pinion of 28 cogs, on an iron shaft, of five inches diameter, working horizontally; and on this latter shaft are cast iron arms, (called a spider,) to which is affixed a wooden drum, seven feet in diameter, which, with the aid of a leather belt, 13 inches wide, and about 36 feet long, the saw is driven. The drum on the saw

shaft is of two feet diameter; and these several pieces of gearing give a very satisfactory motion and power to the saw.

The gudgeons to the water wheel ought to be of about six inches diameter, and run on wooden boxes set so as the work to be against the end of the wood. It will be found to answer as well as any thing else, for the parts just named; but the lower end of the vertical shaft should have a socket gudgeon, in which to affix a toe of caststeel, of two inches diameter, and it should be run in a composition step, of hard, anti-friction material. Copper, zinc, tin, and lead form a good compound—the first being about ten to one of either of the others. I am not certain that I am giving the best proportions—perhaps I have over-stated the latter two, but I cannot refer to proper authority just now. The step should be two or three inches deep, so as to resist the lateral pressure of the gearing, which, at this point, is very great. It will only require a few pounds of the composition, for when prepared it should be set in a cast iron saddle and leaded fast. The boxes for the iron shaft had better be of Babbitt-metal. I have found these several materials to answer better for the places I have assigned to each, than anything I have tried. Upon the lower cogs I use water and on the upper ones tar and grease; which I have found to be the next best lubricator. I prefer wide-faced cogs—some of mine are five and others six and a half inches—the latter width I think most economical in the end, if not in the beginning.

The mill with all the machinery I have in use, I had made to my own order, in Baltimore; and although prices then may not be the same now, yet they may serve as data from which to estimate the cost. But iron was lower then than now, and the heavy castings cost me only three cents per lb.

The mill, with 28 feet carriage, 56 feet	
ways, 52 inch saw, boxing, packing,	
and shipping, cost,	\$398 00
Castings and machinery for driving it,	
cost,	160 00
Thirty-six feet belting, at 80 cents per	
foot, cost,	28 80
	<hr/>
	\$586 80
Freight and incidental expenses, (say	
about,)	13 20

Total cost delivered in Charleston, S. C., \$600 00

The mill was made by Messrs. George Page & Co., whom I have found very gentlemanly in their dealings, as well as skilled in their profession as machinists. They also manufacture Engines, and likewise horse-powers for working their mills.

But there is no longer any necessity for going so far from home to be supplied with all the machinery required to work a circular saw. There are establishments in Augusta, Georgia, and Columbia, in our own State, where such mills are now manufactured. Recently Messrs. Glaze & Co., of the Palmetto Armory, having completed their large contract of arms for the State, have turned part of their attention to the building of Engines, circular saw mills, &c., and, if we are to judge their claims of public patronage, from their past success in all that they have heretofore undertaken, we may assign to them a bright future, as well as greater distinction in this newly chosen field for the exercise of their great mechanical talents.



Believing, Mr. Editor, that I have already written as much as you can afford to press in a single number of your useful journal, I must defer what I would say of other modes of running a mill, of keeping the saw in order, and of many simple, yet useful matters relating thereto, for some more suitable period, if you should think it of sufficient interest for me to resume the subject. P. Q.

Lexington Dist., S. C.

### THE GUANO TRADE.

The recent arbitrary attempt of the Peruvian Agency to control the use of guano after passing out of their hands, has increased the feeling of indignation against them, if that were possible, for their numerous acts of oppression and rapacity. We publish several communications upon the subject in this No., and would draw particular attention to that of the Hon. Willoughby Newton, of Virginia, who, it will be remembered, on the morning of the day on which the guano convention met at Washington, published a letter in the National Intelligencer, calculated to throw a damper upon the efforts of those there assembled to devise means to counteract the machinations of these agents of a foreign government, in their rapacity towards our people. Mr. Newton now takes strong ground in the premises, and as his experience has been very great in the use of this fertilizer, his suggestions are entitled to, and will receive the utmost respect from the farmers of the middle States, who use the guano so largely.

Our friends of the *Southern Planter* also, who took so strange a part, as we thought, on the occasion alluded to above, are now very emphatic in their denunciation of these monopolists, as will be seen by the following notice, from the March No.:

"CEASE VIPER, YOU GNAW A FILE."

In our last number, we gave a notice, as it is called, to the "*Manipulated Guano*" of Reese & Co., manufactured out of the Peruvian, Colombian, and the Mexican guanoes in certain definite, and openly stated proportions. We stated then that it was "probable" that the finer state of subdivision to which their guano was reduced, and which was unattained by the ordinary means at the farmer's command, "might" render it unnecessary to employ so large a proportion of guano for the wheat crop, whilst the residuary phosphate left in the land, "might" benefit the succeeding crop of clover or peas. At all events, that Reese & Co. was the only concern which publicly stated the constituents and proportions of their manure, and thereby come before the public above suspicion, because without disguise.

Our convictions of the value of their compound are now stronger than they were before, though the mode of proof is not pleasant to comment upon.

Mr. Barreda, the agent of the Peruvian government, is certainly of that opinion, whatever he may pretend, if he shall pretend anything, to the contrary. He has proven his opinion by a petty piece of tyranny, which is as narrow as anything ever done by a monopolist. He has refused, as we learn on the best authority, to sell guano to Messrs. Reese & Co. on any terms; and he endeavors to exact pledges from all who purchase of him that they will not sell an ounce to that firm. Beyond all question Mr. Barreda has found out that their article is as good, or better, at the price asked, than Peruvian Guano, in

the form usually applied; and he means to block the game on those who make it, if he can, by an absolute prohibition. Nothing but this supposition can account for his course except the alternative, that he scents an imposition on the public, which he will prevent. We do not plead guilty to charity or credulity enough to accept this latter explanation.

It will be remembered that, last spring, in taking Mr. Barreda's part against the presumed action of the guano convention in Washington, we stated that he might have as little of the true spirit of commercial liberality as a Spaniard could be expected to exhibit; but we confess ourselves unprepared for this vain attempt to keep up his monopoly at the expense, not only of the firm in question, but of the public, and finally of himself. Of course it is futile; for there are parties who will accept his stipulated conditions as to that firm, and immediately sell to it. Supposing him to discover this breach of contract,—which we learn he proposes to do, by a reward of twenty dollars to the informer in each case,—how can he recover damages? We believe that the condition is illegal, as against private rights and public policy, and therefore void; but if it be not, we should like to see a jury which would give damages enough in such a case, even under instructions from the bench, to cover the cost of the suit. But if it were competent to him to exact such conditions, does he expect a large and enlightened commercial community, like Baltimore or Richmond, to sanction such an outrage on their rights? Or can he think that they will see one man crush another by such outrageous proceedings without some sort of retribution?

We hope, for the honor of the community, that the merchants will cease to buy and the farmers to use guano, sooner than yield to this demand.

Mr. Barreda may threaten to go elsewhere,—to leave the country even, and break up the trade; but he cannot do it. It was only three nights ago, that we saw a statement of Dr. Anderson, Chemist to the Highland and Agricultural Society, to the effect, that already the demand of Scotland for guano had fallen off one third; and should sulphate of ammonia recede to the prices of three years ago, that a still further decline must take place in the quantity required for that market. The same, under similar circumstances, will probably prove true as regards England. Here, it is well known, that many persons think they have injured their lands by guano, and the enquiry for it—owing partly to that fact, and partly to a falling wheat market, has not kept up its former rate of increase.

Mr. Barreda, therefore, cannot go elsewhere on better terms. If he could, he would have gone long ago; for what does he care for us? He will, therefore, be compelled to sell here. He will sell directly, or indirectly, to Reese & Co., and they will make manipulated guano as before, and send it to their agents in this city to sell with the enhanced reputation that Mr. Barreda's opposition will give it.

The greatest harm he will have done will have been to himself; and if he could have succeeded completely in his policy, the result would have been very injurious to him; for it would have prevented the sale of a cheaper, or rather, a lower priced article, and would have diminished his sales by just that amount.

We hope he will reconsider his proposition, and not draw upon himself heavier censures than he has yet incurred. Should he, however, refuse, we can only say to him, as we said in the beginning, "cease viper, you gnaw a file."

### THE COMPONENT PARTS OF LEACHED ASHES.

In reply to a request that we will give an analysis of leached or spent ashes, we give that of the author of the "Muck Manual." Dana says a bushel of good ashes contains about  $5\frac{1}{2}$  lbs. of real potash. In leaching ashes generally about one peck of lime is added to each bushel of ashes, and as it loses no bulk during the operation, a cord of leached ashes (103 bushels) contains about the following proportions, allowing the usual proportion to be leached out, or  $4\frac{1}{2}$  lbs. per bushel:

Phosphoric Acid,	117 lbs.
Silica,	140 "
Oxide of Iron,	17 "
Oxide of Manganese,	51 "
Magnesia,	119 "
Carbonate of lime, including that added in leaching,	3,072 "
Potash combined with Silica,	50 "

According to this authority then it will appear that in the use of good spent ashes, applying a hundred bushels to the acre, we have but fifty pounds of Potash, whereas the same quantity of unleached would have given five hundred and fifty pounds. But we have Phosphoric acid equal in amount to that contained in about four hundred pounds of best Mexican Guano, or double that quantity of Peruvian. The proportion of lime is about double in the leached as compared with the unleached, by the lime added for the purpose of more effectually leaching, and the hundred bushels is nearly one half (about two fifths) carbonate of lime, or enough for a single dressing of that material; besides which are the oxides of Iron and Manganese, Magnesia and Silica.

Ashes leached for domestic soap making, will be richer in Potash than those of the soap boiler, owing to the more imperfect method of extracting the alkali. It will be borne in mind too, that the ashes of different kinds of wood show different proportions of the several mineral substances. The Red Beech for instance yielding 22.11 of Potash to the 100; the Oak only 16.20, and the Pine less still, according to the analysis of Sprengel, of Lime the Red Beech gave 25.00, the Oak 17.38; of Phosphoric acid the Beech gave 5.62, the Oak 1.92.—The different parts of the same tree vary also, the leaves and twigs yielding a larger proportion of Potash than the stem or body of the tree.

**SALE OF MUTTON.**—Dr. John R. Woods, of Woodville Depot, Albemarle County, Va., sold a short time since a lot of Muttons, in Richmond, at \$10 per head; several were late lambs, in fact not two years old till late next spring—the best brought \$15—these were Ewes, which he turned off after a certain age, weighed gross upwards of 200, raised with no extra treatment. In a publication in the last Farmer, it is stated that Col. Ware obtained the highest premium at the last Va. State Show, for the best Native Cotswold Buck—also for the best cross breed do.—The Judges awarded Col. Ware these premiums, but the Executive Committee afterwards changed the award, in consequence of a different construction put upon the rule applicable to them, and both of the prizes were decided in favor of Dr. Woods.

### THE ART OF MAKING DIPPED CANDLES.

The following instructions are given upon this subject, at the request of a correspondent, who asks for the information:—

The tallow when melted, should be ladled into a wooden vessel of convenient width and depth, which has been previously heated by filling it with boiling water for an hour or more. Fill the vessel within an inch of the top with melted tallow, and keep it at that height, by adding hot tallow, or hot water. By this means the candles will be kept of a full size at the top, and not taper off to a point, as is often seen with country candles.

The tallow when used for dipping candles should not be too hot. A temperature that will allow the finger to be dipped in without burning is sufficiently hot, and at this temperature the candles will take on the tallow very fast. The wicks should be lowered into the melted tallow very gradually, and should be lifted out of the tallow so slowly that when the bottom of the candles are clear from the surface of the melted tallow, no tallow will run off them. When the candles are raised quick out of the melted tallow, the tallow will run off the candles in a stream, whereas, if the candles are raised slowly, not a particle of tallow will fall from the candles. A few trials will satisfy any person in this matter. If the tallow is boiling hot the wick will not take on the tallow to any considerable extent. When candles are raised out of the tallow rapidly, the candles will be large at the bottom, and the tallow will extend below the wick, so that when burnt in a candlestick, a piece of the candle will have no wick in it, and therefore for burning will be useless.

Where persons have no suitable wooden vessel, an iron vessel will answer for a dipping. When tallow has been thoroughly melted over the fire, should it be dirty or impure, throw into it while hot, a small quantity of finely pulverized alum, and in a short time a scum will be seen rising to the surface, in appearance like dirty froth. Skim this off as it rises. This skim will rise for half an hour or more.

To improve the light of the wicks, dissolve a lump of lime, say 4 oz., and 1 oz. of saltpetre, in a gallon of water, and when the solution becomes clear decant it off, steep the wicks in this, and when perfectly dry string them on your sticks when they will be fit for use. By preparing your wicks thus they will give out a purer flame and yield a superior light, while the candles will not melt and run down the side. The wicks must be perfectly dry before they are put into the tallow.

### "HOG CHOLERA."

This extraordinary disease among hogs has been very destructive, from all accounts. A correspondent of the *Ohio Farmer* estimates that 60,000 hogs have died with it, within a hundred miles of Cincinnati. It is so sudden in its effects that it defies all attempt at remedy. A thriving and apparently healthy hog is attacked and dies in a few moments, and where large herds are kept together, one half of them may be the victims of the disease in a few days. Nor is there any method of treatment or feeding which would seem to prevent the disease. Corn fed and swill fed, seem to be alike liable to it.

### The Guano Interdict—Manipulated Guano.

The following from one of the best and most respectable farmers of Montgomery Co., Md., is a type of the feeling produced on the minds of the consumers of Guano, by the recent arbitrary act of the Peruvian Agency:

MONTGOMERY Co., MARCH, 1857.

Messrs. Editors:—I have read with much surprise in the number for this month of your valuable paper, the prohibition of Messrs. Barreda & Bro., agents of the Peruvian Government, against parties engaged in the manipulation of guano, and must confess that so arbitrary and despotic a measure has seldom dared to appear before the American people. Your remarks upon the subject speak much my sentiments, but I go further in denouncing all parties that lend their sanction in any way tending to dictate to farmers how they shall use Peruvian Guano, and only as they say. I was one of the first to use Peruvian Guano in this county, and have been a large consumer, but at the same time, I cannot consent that the agents of a foreign government shall say to me that you shall not use Peruvian Guano in any other form; such tyrannical measures become a nullity. I have become convinced of late years that the Peruvian Guano when used consecutively year after year becomes too strong a stimulant for the soil, and is fast tending to a real exhaustion; so satisfied am I of the fact that I have ceased to use it, to any thing like the extent that I did formerly, directing my attention to something more permanent, and within the past year my attention has been drawn to the Manipulated Guano of Mr. John Kettlewell of Baltimore. I had seen the effects of it last spring on corn producing a crop equal or superior to any that I had ever seen. I purchased in the fall for my wheat crop, and placed side by side with the best Peruvian Guano, and my wheat, where the Manipulated was applied, has decidedly the advantage, thus far presenting a most beautiful appearance, and prospect for a fine yield. It cannot but strike every farmer who will read Mr. Kettlewell's plain statement of this guano that it is the one thing needful for the land; I have entire confidence in it, and shall apply it as long as it can be obtained, and rather than he should be cut off from supplies, if I can be of service in effecting purchases for him, you Messrs. Editors, will please advise me.

Respectfully yours,  
N. C. DICKINSON.

### Long Abstinence—Whitman's Corn & Cob Mill.

To the Editors of the American Farmer:—

Dear Sirs:—My overseer at Bluff Point, Westmoreland county, informs me that he had two sheep covered up in the snow on Sunday the 18th, and remained until the Wednesday week following, and was then taken out alive, and is now doing well, which he wished published; but there was another circumstance connected with the snow storm at that place that was still more fortunate; he was caught without meal with a large family, not less than forty-five or six miles from any mill, and a very bad way to it; we happened to have one of Mr. Whitman's Cob Mills, and we started it and ground meal and hominy in abundance, for all the slaves and his family during the time the roads were impassable; and really I think every farmer that has no water Mill of his own ought to have

one, they will not only guard against snow storms, but come in so well in dry seasons when the water Mills are dry, besides answering so well the purpose they are made for. If you think this worth publishing, you can do so. JOHN ARNOLD,

King George, Va. Feb. 16, 1857.

### MARYLAND STATE AGRICULTURAL SOCIETY.

It is known to the members, that for several years past the Society has been in debt, and that each succeeding year, until the last, the debt has increased. The result of the last Exhibition, enabled the Executive Committee to pay off about one-half of the indebtedness; and at a meeting of the Executive Committee, soon after the election of the present Board, it was determined to make an effort to clear off the balance, by voluntary contributions of the members. At our request, the Treasurer has favored us with the following list of subscribers to this fund, which no doubt would have been considerably increased, if the opportunity offered of his being able to see other members, whose liberality is well known.

Ramsay McHenry, Harford Co.	\$350
John Merryman, Baltimore Co.	100
James N. Goldsborough, Talbot Co.	50
Robert Bowie, Georgetown, D. C.	20
S. Sands & Worthington, Baltimore,	20
M. Tilghman Goldsborough, Talbot Co.	20
George R. Dennis, Frederick Co.	20
Wm. C. Wilson, Baltimore,	10
Clement Hill, Prince George's Co.	50
Robert Dick, Montgomery Co.	10
Charles B. Calvert, Prince George's Co.	100
James Mullikin, Prince George's Co.	10
Martin Goldsborough, Baltimore,	10
Frank Cooke, Baltimore,	10
Oden Bowie, Prince George's Co.	20
Charles Ridgely of H. Baltimore Co.	91
J. Howard McHenry, Baltimore Co.	100

### DE BURG'S SUPER PHOSPHATE.

In an article in the January No. headed "Bones vs. Guano," we made an erroneous statement of the use of *Colombian Guano*, by Dr. Stuart, of King George Co. Va. Dr. S. informs us that it was not *Colombian Guano*, but "De Burg's Super phosphate" which he used, and which produced so fine an effect upon his corn crop. He is so well pleased with it, that he has purchased the same article for his coming crop. We make this correction at the request of Dr. S. who is well known as an extensive Virginia farmer.

THE CHINESE SUGAR CANE.—We are advised by a gentleman who has given much attention to the subject, and is very largely engaged this season in the cultivation of the Sugar Cane, to warn those intending to plant; that "the idea of planting one seed every six inches will not do, nor can any crop be well cultivated by field hands, in rows narrower than 3½ feet. Plant not less than 6, and better 10 seed in a place, to ensure a stand. The opinion is that it don't 'tiller.' In very rich land it may 'sucker,' as corn does, and to about as much advantage."



## DAIRY FARMING.

THE REARING AND FEEDING OF DAIRY STOCK  
AND THE MANAGEMENT OF THEIR PRODUCE.

BY RURICOLA.

(Continued from the March Farmer.)

### THE DISEASES OF COWS.

The principal diseases to which milch-kine are most subject are generally of an inflammatory character. In the majority of these complaints (except perhaps in their very earliest stages, when a judicious change of food and a little opening medicine may effect all that is requisite) the assistance of an experienced veterinary surgeon is indispensable. It is poor economy to grudge this trifling expense, and worse judgment to listen to the ridiculous recipes, all of them infallible and each different from the other, which the wiseacres of every country village are so ready to dispense.

All cattle are more or less liable to "colds," and although moderate care and precaution is all that is necessary to guard against them, yet when, from one cause or another, stock are thus affected no time should be lost in giving them the necessary remedies, as, if neglected, inflammation of the lungs or disease of the bowels is not unfrequently the result; besides which, considerable danger and loss may arise from such maladies being the forerunners of other diseases. As a general rule therefore, when a cow is attacked by a severe cold she should be kept stalled, free from all draughts, and well littered, and a warm bran mash administered night and morning. Should the bowels however appear to be in any degree confined, then it will be also advisable to administer from half a pound to one pound, according to the size of the cow, of Epsom salts and a drachm of ginger dissolved in two or three pints of warm gruel. When feverish symptoms supervene, as is not uncommon, recourse must then be had to the regular febrifuge medicines. Mr. Youatt recommends a dose consisting of one drachm of digitalis (foxglove), two drachms of emetic tartar, and three of nitre, dissolved in gruel, to be administered night and morning; and in nine cases out of ten the mixture will work a cure. If however the fever runs high, bleeding becomes necessary, and should be continued until the animal's pulse resumes its natural beat.

"Colic" is also of frequent occurrence amongst cattle, and should be carefully as well as promptly treated. The animal should be gently walked about, and two or three doses, each consisting of two drachms of powdered ginger in some warm gruel, administered within an hour or two of each other. Should these fail however in producing any alleviation of the symptoms, the assistance of a veterinary surgeon becomes absolutely indispensable.

Another malady with which cattle are often affected is "stoven," and this is generally produced by incautious feeding or sudden alteration of diet. The symptoms are swelling of the paunch, and general indisposition to eat or, in short, to do anything. Mr. Youatt thus speaks of this really dangerous complaint:—"Various remedies have been recommended and tried for this malady, which, if not discovered and speedily attacked, too frequently proves fatal. The best means of affording relief is to make a puncture with a trocar in the flank on the left side, two or three inches below the spinal column, and mid-way between the haunch-bone

and the last rib. The paunch lies immediately below this place, and will necessarily be punctured and the air will escape through the aperture.—When the trocar has been inserted, the stilet may be immediately withdrawn, and the canula suffered to remain as long as the operator pleases; and in imminent cases, such fluids—as, for instance, three drachms of chloride of lime in a little warm water—injected through this pipe, as will best tend to neutralize the offending gas. If, from absence of proper means, a knife has been used, a quill, or any small hollow tube, may be introduced into the puncture. There is no danger attending this operation if a trocar and canula is used." When cattle get what is called "foul in the foot," their hoofs should be constantly bathed in warm water, their litter kept dry and frequently changed, and any swelling, when ripe, opened, and all the matter carefully extracted; after which operation the feet should be again kept bathed, and, when necessary, bound in coarse linen cloth.

Dysentery and diarrhoea should be treated, the former with gentle aperients and dried food, such as hay, straw, etc., and the latter with mild astringents. The following prescription is a valuable one:—One grain of opium, two grains of ginger, four grains of catechu, and eight grains of chalk, administered night and morning.

With good food, moderate care, and warmth, cattle are not subject to many maladies. Accidents however will arise; and very often the incautious introduction of recently purchased stock into the herd is productive of considerable mischief. As a general rule, it is always expedient, where possible, to keep new stock separate from the old some weeks, in order to discover any disease which may be latent in them, as well as to guard against the consequences of a sudden change of diet. Wherever an animal has more than one return of the same malady, the farmer should consider whether it be not expedient to fatten and get rid of it as soon as possible. Sickly stock are only a trouble and an anxiety, and should never be kept for propagation. Let the farmer bear this in mind, and bestow upon healthy beasts a careful attention to their diet, cleanliness, and warmth, and he will have little occasion for the above recipes or the assistance of a skilled practitioner.

### ON CALVES.

As a general rule, heifers should not be sent to the bull until they are at least two years old.\* The most advantageous time is the spring of the year, from June to July, as they then calve in March or April. Calves born after the last month are accounted late, and are seldom reared for breeding or fattening stock. To secure conception it is always advisable to wait until the cow is in season, and not to resort to any artificial means to induce her to take the bull. Conception usually takes place after one connection; the cow going with calf about forty-one weeks, or on an average about 285 days. It sometimes happens however that after having taken the bull the cow becomes again in season, in which case it may be with certainty assumed that she is not pregnant, and that another service has become necessary.

During the last two months of her pregnancy the cow should be suffered to run dry, and at the same time she should not be kept in too high con-

\* In Cheshire it is usual to send them when only twelve months old.

dition, as in some cases over-feeding will cause miscarriage, and great care should be taken to keep the bowels in good open order, as well as to prevent anything like straining or over-driving. Good air, moderate exercise, and not too stimulating or fattening diet, is all that is necessary in a majority of instances to secure a safe and easy delivery. Nature is herself generally the best of doctors. When however it is likely to be attended with more than ordinary difficulty or danger, humanity, as well as self interest, point out the expediency of securing the assistance of an able veterinary surgeon, particularly if there be reason to believe that the calf is thrown crosswise. From ignorance and mismanagement many a valuable beast has been lost, when the simplest exercise of a little skill might have saved both the animal and its offspring. I cannot however do better, since a discussion of this branch of veterinary art does not fall within the plan of the present work, than refer the reader anxious to obtain some general knowledge upon so important a subject to Mr. Stephens's 'Book of the Farm,' pp. 505-521.

After the cow has calved, she should be left quietly with her calf, when in all probability she will begin to lick off all the slimy material adhering to it; should she not manifest any inclination to do this, it will be as well to sprinkle a little salt over it by way of inducement to her. It is expedient to do this at all times. If she appear exhausted, a warm mash of oat meal with a little salt in it, or some warm gruel in which a pint of good ale has been mixed, will generally have the effect of recruiting her strength. Care also should be taken that the after-birth should be taken from her, and the cow properly cleansed. As nature has evidently intended that the first milk, or biestings, as it is usually called, should perform certain medicinal functions in the young animal, and as it is generally unfit for any other purpose, I think the first calf, under whatever mode of feeding it is ultimately intended to be reared, should be allowed to suck its mother at least once, and in all cases it ought to have the first-drawn milk for a week or ten days after its birth. After that time the milk will be good for dairy purposes, and the young animal may be safely brought up by hand. If the calf is allowed to remain long on the cow, the latter will seldom after give her milk freely to the pail, but constantly retain it, to the manifest injury of her secreting powers. A good cow yields more milk than a calf can suck, and it is well known that unless the udder be completely emptied at each milking the milk is apt to dry up, and cause a contraction of the udder, as well as to occasion a gradual diminution of the lactic secretion; and a calf will thrive quite as well under a kind and judicious attendant as it will when left with its mother. In some cases it is necessary to milk the cow in order to prevent a painful distension of the udder; the calf should then be made to drink the milk so drawn before it is allowed to take anything else.

In determining however the mode in which the farmer should bring up his calves, he should be guided by many attendant circumstances. In the first place, he should take into calculation the nature of the market for the produce of his cows. If milk happens to be a really valuable commodity in his immediate neighborhood, commanding a fair price and realizing a handsome profit, it is quite clear that he should rear his calves upon as little milk as possible.

If for butter alone there is a sale, then his calves may be reared upon such food as mixes readily and advantageously with skimmed or butter-milk. Should there be a demand for pork or bacon, then it will answer his purpose better to throw the skim-milk into his pig-trough. While on the other hand, if the state of the neighboring market should render it expedient to rear and fatten calves for veal or breeding stock, no food is so nutritious or so likely to produce the best results as that which nature has herself provided. In all cases an abundant supply of good and congenial food is essential to the growth and successful rearing of the young animal. As however the principal object which I have in writing this little work is to fully develop all the resources of dairy farming, I shall assume that milk in one form or another is the produce about which the farmer is most anxious, and that therefore it is a point of the greatest moment to him to discover some food similar and equally nutritive with milk.

The best method with which I am acquainted of rearing a calf, having regard to the main object he has started, is to take it away at once from its mother if it be not a first calf, taking care to let it have a large proportion of the milk warm from the cow during the first week or fortnight. The milk during the whole of that time is possessed of certain medicinal qualities which are absolutely necessary to the calf and which cannot be so effectually supplied by any other food. It is also, as I have before remarked, more or less unfit for dairy purposes. After this time, although for the first month sweet milk warm from the cow with the biestings of other stock should still form the principal part of its nourishment, substitutes, such as hay-tea, pea-meal, linseed-jelly, and gruel may be provided. Of all these, I am inclined to give the preference to the preparation of hay-tea, as described by Mr. Youatt in his 'Complete Grazier,' p. 41. The italics in the following extract are the results of my own experience.

"At the end of three or four days, or perhaps week or even a fortnight, after a calf has been dropped, and the first passages have been cleared by allowing it to drink as much of the cow's milk as it feels inclined for, let the quantity usually allotted for a meal be mixed, consisting for the first week of three parts milk and one part hay-tea. The only nourishing infusion of hay is that which is made from the best and sweetest hay, cut by a chaff-cut into pieces about two inches long, and put into an earthen vessel; over this boiling water should be poured, and the whole allowed to stand for ten hours, during which time it ought to be kept carefully closed. After the first week, the proportion of milk and hay-tea may be equal, then composed of two-thirds of hay-tea and one of milk; and a length one-fourth part of milk will be sufficient. This food should be given to the calf in a lukewarm state at least three if not four times a day, in quantities averaging three quarts at each meal, but gradually increasing to four quarts as the calf grows older. Towards the end of the second month, beside the usual quantity given at each meal (composed of the parts of the infusion and one of milk,) a small wisp or bundle of hay is to be laid before the calf, which will gradually come to eat it; but if the weather is favorable, as in the month of May, the calf may be turned out to graze in a fine, sweet pasture well-sheltered from the wind and sun. This may be continued until towards the latter end of the third month, when if the calf grazes heartily

each meal may be reduced to less than a quart of milk with hay-water; or skimmed milk or fresh butter-milk may be substituted for new milk. At the expiration of the third month the animal will hardly require to be fed by hand, though if this should still be necessary, one quart of the infusion given daily, and which during the summer need not be warmed, will be sufficient." The hay-tea should always be made fresh every second day, as it soon loses its nutritious quality.

When the calf is separated from its mother, it ought to be removed to the calf-pens, which, as I have before said, should adjoin, although not be too near to the cow-house; for with due deference to the opinion of Mr. Stephens, my experience tells me that the constant bleating of calves has an undoubtedly prejudicial effect upon some cows, as testified by their recklessness, their anxious expression and constant anxiety to rid themselves of their neck-chain. I feel convinced that cows do not lose the recollection of their young so quickly as is supposed by some persons, although the retentiveness of their memory differs considerably with the constitution of the animals.

The calves should then be taught to drink—a matter, by the bye, of sometimes no ordinary difficulty, and requiring a very considerable amount of patience and temper in the instructor. For this reason I prefer that in all that concerns the milking of cows and feeding of young and unweaned stock, women should be employed. They are infinitely better suited to the work, and by their gentleness are generally more successful in overcoming obstinacy or fear in the animals committed to their charge than men. The simplest mode of teaching a calf to drink is to hold its head over an open trough, some six or eight inches deep, and by degrees to bring its mouth down until it touches the warm fluid, and then by sinking the hand into the liquid, and turning up one or two fingers into the animal's mouth, tempt it to suck. If this be done quietly and with kindness, in nine cases out of ten there will be very little opposition offered by the calf. Care must be taken not to allow the nostrils to be covered by the contents of the trough, in which case it will become restive from the difficulty it experiences in breathing, and from the pain occasioned by the fluid rising into the nose at every inhalation. A pail is most generally used, but I prefer an open trough, as it allows more play to the feeder's hands, and calves have not the same fear of putting their heads to it as they have to carrying them in a pail.

The great advantage derived from keeping calves separate is, that it prevents them contracting the bad habit of sucking each other's ears or navel; and by placing them in open-fenced pens they are enabled to see one another, which will keep them from fretting. These pens should be kept perfectly dry, and they should be frequently lime-washed and always well-aired.

At a month old the male calves should be castrated, an operation of little risk, although it should never be attempted by any one who has not had some experience in its performance. For a few days following the operation the animal should be watched, and its thirst allayed by warm drinks; should any swelling or inflammation appear in the parts affected, fomentations of warm water should be frequently applied. As a general rule perfect quiet, slightly laxative food, and a subdued light with plenty of air will do all that is necessary to restore the animal to perfect ease.

As the season advances and succulent grasses begin to make their appearance, the calves, having been previously accustomed to the open air by being turned out into a covered shed and yard during the middle of the day, should be allowed to graze on dry pasture-land well sprinkled with spreading trees, to protect them from the heat of the sun and the inclemency of the season. At six weeks or two months, if they have taken kindly to their food, and everything likely to retard their growth has been effectually prevented, they are fit for the butcher; and at three, or at the latest four months, if they are intended for breeding, little more is requisite than ordinary care and attention to their few wants and good pasture.

In some counties the calves are handed over almost immediately to the butcher; the milk being more valuable in the cheese-sub; one or two of the finest bulls being now and then retained, until old enough to be sent to Norfolk and to other grazing or breeding counties.

### BOOKS.

We acknowledge the receipt from John P. Jewett & Co., Boston, of "The Anatomy and Physiology of the Horse, with anatomical and questional illustrations, by George H. Dadd, M. D. V. S., author of the "Modern Horse Doctor," &c. This work is designed for the use of veterinary surgeons, and for students of the science, and will be found serviceable to such country physicians as may be disposed to increase their usefulness to the community, by more authoritative knowledge of the medical and surgical treatment of animals. We should rejoice to see this business taken out of the hands of ignorant quacks. This will be done when intelligent men learn to treat it scientifically.

We are indebted to J. C. Holmes, Esq., Secretary of the Michigan State Agricultural Society, for a Volume of the *TRANSACTIONS* of that Society for 1855. It is a well printed, well bound volume of 800 pages, containing the proceedings of the State Society for the year, a number of prize Essays, and an Address by Hon. Jacob Broom, of Phila. It contains also the proceedings of several County Societies, with sundry Essays and Addresses, and embodies a mass of valuable matter, we do not doubt, though we have not made so careful an examination as we design.

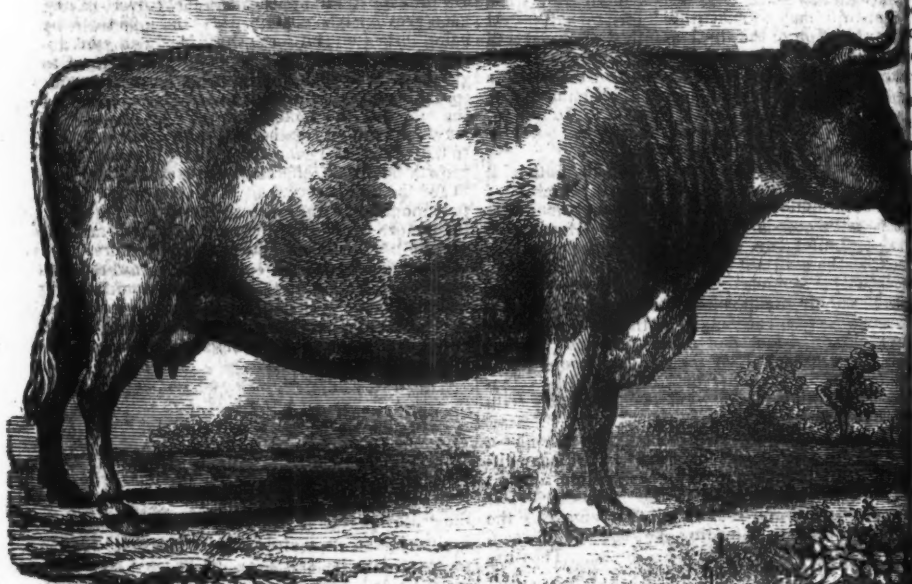
We have also a copy of the same for the Md. State Agricultural Society. When will our Society begin to reciprocate these favors? It is one of the few State Societies which publishes no volume of "Transactions."

**SCARCITY OF TOBACCO SEED.**—Letters received in this city from different parts of the State, report a great demand for tobacco seed. The favorable weather about the first of February, induced the planters to sow at an earlier period than usual, in consequence of which the plants were fully above the ground when we were visited by the late cold spell of weather. They were nearly all killed by the frost, and there is now a general inquiry for more seed. As much as five dollars has been offered for a spoonful of these little seed.—*Louisville Journal*.

We have similar accounts from Virginia.

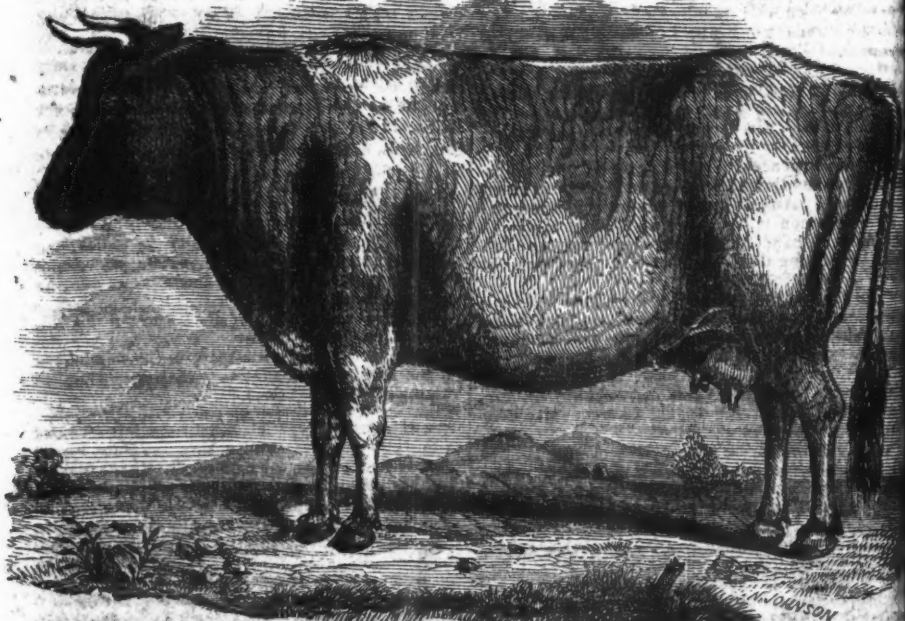


IMPORTED FAITH, CALVED 1850.



Imported August, 1854, from the Island of Jersey, by Mr. J. A. Taintor, for J. HOWARD McHENRY.  
 2d Prize Cow, U. S. Agricultural Society's Show, Philadelphia, 1856. One of Prize Herd of Jerseys, U. S. Agricultural Society's Show, Philadelphia, 1856. 2d Prize, Imported Cow, Maryland State Agricultural Society's Show, 1856.

IMPORTED CHARITY, CALVED 1850.



Imported August, 1854, from the Island of Jersey, by Mr. J. A. Taintor, for J. HOWARD McHENRY.  
 FIRST PRIZE, Maryland State Agricultural Society's Show, 1856. One of Prize Herd of Jerseys, U. S. Agricultural Society's Show, 1856.

**THE WHEAT CROP.**—We most earnestly call on our friends throughout the middle and grain growing States, to report to us in time for our May and June numbers, a faithful and reliable statement of the probable results of the wheat crop. We hope at some little extra effort will be made to effect object certainly of deep interest not only to the farmer, but to the whole country.

A portion of this month's issue, is printed on an inferior quality of paper—occasioned by the delay in which our supply from the manufacturer was expected, having been detained two weeks beyond her time, and the impossibility of getting a supply of the right quality and size elsewhere.

To accommodate the extensive favors of our advertising friends, we are again compelled to issue a double sheet (64 pages) beside the cover.—Our readers will admit that they get the full worth of their dollar.

**TRIALS OF MACHINERY.**—We have received from Mr. T. Tilghman, of Md., a copy of the circular issued by the Committee appointed by the U. S. Agricultural Society, relative to the trial of Agricultural Implements and Machinery, which is to take place at Louisville, Ky., during the annual exhibition of the National Society, the ensuing fall. We hope and expect our machinists will be present on the occasion, to contend for the honors which will then and there be presented to them, and maintain the high character which our State now enjoys in the manufacture of Agricultural machinery.

**ESSAY ON COTTON CULTURE.**—We have on file, for our next No., a valuable Premium Essay on the Culture of Cotton, selected at our request by Samuel R. Black, Esq., of Columbia, S. C. We regret our inability to publish it this month. We have also an able paper on the subject of an Agricultural College, from the pen of Mr. Black, which will also appear in our next.

In 1855, the imports of guano from Peru were 13,134 tons to England, 70,429 to U. S., 32,000 to France, and 9,422 to Spain, and 1829 to Asia. In 1856, 170,400 tons to England, 98,798 to the U. S., and 13,480 to France. Total net proceeds in 2 years, \$6,665,442.

#### NEW ADVERTISEMENTS.

The following new advertisements appear in this month's number of the "Farmer," all of which demand the attention of the Farmers and Planters of the States in which our journal circulates:—

Joe Murray, of Balt., an old and experienced machinist, is prepared for all kinds of mill work and machinery.

Allen & Needles, of Philadelphia, offer their Super-Phosphates, Guano, Fish Manure, &c.

E. Whitman & Co., of Baltimore, Threshing Machines, for 1857—also the Wire Spring-Tooth Horse Rake, of the value of which they give many testimonials.

A Clement, of Philadelphia, the well known Agent for the purchase of Stock of all kinds, offers his services to the public.

J. J. & F. Turner, of Baltimore, continue the publication of their proofs of the value of De Burg's Super-Phosphates, and also of the Manipulated Guano.

A. Harshbarger, of Harrisburg, offers very liberal terms to those wishing to establish Orange or Hedge—we hope he will be encouraged.

J. S. Reese & Co., of Baltimore, are prepared to fill all orders for Manipulated Guano, and asks the attention of tobacco growers to it.

J. M. Thorburn & Co., New York, offers the Chinese Sugar Cane Seed, and all kinds of seeds.

W. J. Fife, of Virginia, his valuable farm in Spottsylvania Co. near Fredericksburg—worthy attention of capitalists, and northern men wishing to obtain easily cultivated lands in that State.

Saml. Hunt, Baltimore, all kind of Saddlery, Harness, Trunks, &c.; the attention of those wanting such articles is called to his stock.

E. Owen, Buckingham C. H., Va., offers tracts of land, that should arrest the attention of those wishing to invest in real estate, which must ultimately very greatly increase in value, as Virginia is in the belt of wheat lands in this country which will flourish in the production of that cereal, when the West shall have failed in its continued production.

H. F. Stickney, Baltimore, offers the Mineral Paint to those intending to paint up this season. We have tested it, and are well pleased with the result, and recommend others to give it a trial.

G. & C. Merriam, Springfield, are the publishers of Webster's Quarto Dictionary, (which can be had at all the principal bookstores). It should be in the library of every literary or professional man, and indeed of every family, as it is the standard criterion of the English language.

H. A. Mish, Harrisburg, Pa., offers a variety of Strawberry plants; these strawberries were described at length in a late number of the Farmer, by Mr. Prince.

W. R. Prince & Co., Flushing, N. Y., a large variety of Fruit and Ornamental Trees, Tubers, Willows, Sugar Cane Seed, Strawberries, &c., &c.

Col. J. W. Ware, of Clarke Co., Va., will stand his "Gonzales" horse this season; no higher bred horse can be found than this.

F. H. Grupy, Baltimore, appeals very strongly to those interested in hides, to his advertisements in this month's Farmer. We have no doubt Mr. G., as well as the farmers, will find the advantage of advertising in the Farmer.

C. M. Saxton & Co., New York, it will be seen has added very largely to their list of publications, and have secured the copy rights of the agricultural books of several celebrated publishers. Their advertisements are always read with interest, and we have no doubt many a farm house will be supplied with literary food, through this medium, which would not otherwise reach them. We will aid them all in our power in their public spirited efforts.

Pitkin Brothers, Louisville, Ky., has a large supply of Chinese Sugar Cane, Osage Orange and other seeds.

Oden Bowie, of P. George's, Md., has very superior Devon Stock for sale—his herd has borne off the highest premiums of our State Exhibitions, whenever exhibited, and have always been much admired for their beauty and excellent points. We will receive orders for any of this herd.

C. Hill, of P. George's, has the Durham Stock in its purity, and for this breed, has likewise borne off the honors at our State Shows. We know of no source whence better short horns could be obtained in this quarter of the country.

Robbins & Co., Baltimore, are the Agents for Watson's \$10 Sewing Machine, and are now exhibiting it in operation to crowds of visitors daily congregating at their store. It is certainly worth a visit to see it working up the garments.

Robt. Sears, New York, offer inducements to persons out of employment, to sell their books, which are all of an excellent character, and such as no man can hesitate to recommend, so far as they have come under our observation.

H. M. Smith, of Richmond, has Davey's Patent Gleaner, which he offers on the most liberal terms, a saving of far more than the cost of the Gleaner, can be made on any farm in a season.

Cornell & Dorsey, Balt., Agents for Hildreth's Super-Phosphate of Lime, which is recommended highly by Dr. Jackson, of Boston, as fertilizer for tobacco, corn and all cereals. In this age of improvement, we hope it will have a fair trial with other manures now being used.

Geo. Kettlewells, of Balt., again presents his claims to patronage, for his Manipulated Guano, and other fertilizers, and is prepared to supply all orders, notwithstanding the recent attempt of the Peruvian Agency to interfere with his business, by refusing to sell to him and others engaged in the use of that article in combination with other kinds of guano, &c.

Emery Brothers, N. Y., present strong certificates of the value of their Horse Power and Thresher, which we know have been widely disseminated through the country, and highly approved of.

B. M. Rhodes & Co., Balt., offer to the public their Super-Phosphate of Lime, the Magic Corn and Cob Mill, and other agricultural implements and machinery, and fertilizers, for particulars of which reference is made to a series of advertisements in this No.

J. S. Wright, through his Agency in this city, presents his claims to the farmers for Atkins' Automaton, or Self-Raking Reaper and Mower, the use of which, it will be seen in his advertisement, has very largely increased since its first introduction to the public.

Wm. Trego, Manufacturing Chemist, Balt., has made improvements in the manufacture of his Ammoniated Soluble Phosphates—the constituents of which he gives in his advertisement, and are certainly of the most valuable ingredients to make a good fertilizer.

**THE FRUIT CROP.**—We have reason to hope, that the fruit crop has escaped from any serious injury, notwithstanding the severe winter and spring.

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## BALTIMORE MARKET—MARCH 31.

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Flour, Howard st. and Ohio, \$5.75 for super; extra Western \$5.15; City Mills \$5.25-5.50. Rye Flour \$3.75. Country Meal \$2.75-2.87 per bbl. Wheat, good reds, \$1.35-1.38; \$1.38-1.39 for good mixed; \$1.55-1.56 for good to prime whites, and \$1.62-1.68 for choice family flour lots, which are in good demand. Rye, \$4.74-74c. Pa. 76c. Oats, Va. 44c. Md. 44c. and Pa. 44c. Rice 44c. for fair to prime lots. Clover Seed, good to prime, \$3.75-3.87 per bushel; Timothy Seed \$5.75 per bushel. Whiskey, 25c. for made; Eng. Island and Cuba \$3.75; Porto Rico \$3.74-3.75. N. Orleans \$3.61 for fair to prime. Molasses is in demand and firm, Cuba Musco 51c.55, and clayed 44c. N. Orleans 67 for old, and 75 for new crop; refined syrup 72c.50. Cattle beef is firm, at \$1.25-1.26 on the hoof, equal to \$5.50-11 a cwt. and averaging \$5.12 gross. Hogs \$6.50-9.25 for 100 lbs. net, a decline. Sheep \$5.50-5.50 per 100 lbs. Cotton, firm, upland and gulf, 12c.15-15c. 6 months. Feathers, 50c.50 for good Southern and Western Live Geese. Mackerel, No. 1, \$1.15 for medium; \$1.10 for large, and large No. 2, \$1.01 per bbl. dry Codfish \$14.25 per 100 lbs. Tobacco, continues active

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Pitts Brothers, Louisville, Ky., has a large supply of Chinese Sugar Cane, Oase Orange and other seeds.

Oden Bowie, of P. George's, Md., has very superior Devon Stock for sale—his herd has borne off the highest premiums of our State Exhibitions, whenever exhibited, and have always been much admired for their beauty and excellent points. We will receive orders for any of this herd.

C. Hill, of P. George's, has the Durham Stock in its purity, and for this breed, has likewise borne off the honors of our State Shows. We know of no source whence better short horns could be obtained in this quarter of the country.

Robbins & Co., Baltimore, are the Agents for Watson's \$10 Sewing Machine, and are now exhibiting it in operation to crowds of visitors daily congregating at their store. It is certainly worth a visit to see it working up the garments.

Robt. Sears, New York, offer inducements to persons out of employment, to sell their books, which are all of an excellent character, and such as no man can hesitate to recommend, so far as they have come under our observation.

H. M. Smith, of Richmond, has Davar's Patent Gleaner, which he offers on the most liberal terms, a saving of far more than the cost of the Gleaner, can be made on any farm in a season.

Cornell & Dorsey, Balt., Agents for Hildreth's Super-Phosphate of Lime, which is recommended highly by Dr. Jackson, of Boston, as fertilizer for tobacco, corn and all cereals. In this age of improvement, we hope it will have a fair trial with other manures now being used.

Jno. Kettlewells, of Balt., again presents his claims to patronage, for his Manipulated Guano, and other fertilizers, and is prepared to supply all orders, notwithstanding the recent attempt of the Peruvian Agency to interfere with his business, by refusing to sell to him and others engaged in the use of that article in combination with other kinds of guano, &c.

Emery Brothers, N. Y., present strong certificates of the value of their Horse Power and Thresher, which we know have been widely disseminated through the country, and highly approved of.

E. M. Rhodes & Co., Balt., offer to the public their Super-Phosphate of Lime, the Magic Corn and Cob Mill, and other agricultural implements and machinery, and fertilizers, for particulars of which reference is made to a series of advertisements in this No.

J. S. Wright, through his Agency in this city, presents his claims to the farmers for Atkins' Automation, or Self-Raking Reaper and Mower, the use of which, it will be seen in his advertisement, has very largely increased since its first introduction to the public.

Wm. Trege, Manufacturing Chemist, Balt., has made improvements in the manufacture of his Ammoniated Soluble Phosphates—the constituents of which he gives in his advertisement, and are certainly of the most valuable ingredients to make a good fertilizer.

**THE FRUIT CROP.**—We have reason to hope, that the fruit crop has escaped from any serious injury, notwithstanding the severe winter and spring.

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